File No. Q-11013/4/2016-eGov

GOVERNMENT OF INDIA

Ministry of Health & Family Welfare (MoHFW)

DOHFW DEPARTMENT

E-HEALTH

SUBJECT

Main Category	:	
Sub Category	:	
Description	:	Matters relating to setting up of Integrated Health Information Platform (IHIP)

OTHER DETAILS

Retention	:	
Priority	:	
Language	:	
Remarks	:	

Department of Health & Family Welfare
e-Governance Division
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Subject: Minutes of the Steering Committee Meeting on E-Health held on 27th July, 2015 to review progress of Health Mission Mode Project, discuss the comments/suggestions on EFC Memorandum & way forward

A meeting of the Steering Committee on E-Health was held on 27th July 2015 to discuss the comments/ suggestions received from NITI AYOG, D/o Expenditure and D/o E & IT on the Health MMP EFC Memorandum. The meeting was chaired by Shri B.P. Sharma, Secretary (HFW). The list of participants is placed at **Annexure - A**.

2. Secretary(HFW) welcomed the participants and requested Shri N. B. Dhal, JS(eGov), DoHFW to apprise the members and participants regarding progress on Health MMP and other strategic initiatives.

3. JS(eGov) made a brief presentation on the MMP's salient features, summary of the comments/suggestions received on the EFC Memorandum and progress on setting up of NeHA & proposed legislation on health data privacy & security. A copy of the presentation is placed at **Annexure –B.**

4. JS(eGov) informed that Health MMP is fully aligned with the principles of 'E-Kranti (NeGP 2.0)' under Digital India programme and would work towards achieving the Hon'ble PM's vision of providing a wide set of services (covering public health, services at hospitals, drugs supply chain, GRP and Citizen portal) and developing electronic health records of citizens across all public hospitals in states initially and nationwide progressively. The architectural components, like HIEs and EHR repositories in states, provide for integration of data and EHRs from private

hospitals as well. It was also informed that only Telemedicine has been kept outside the scope of the DPR. The strategic implementation-framework envisaged covered standards, modular implementation approach, progressive use of UID (Aadhar), federated architecture, use of GoI Cloud/National Information Infrastructure, mobile & other upcoming technologies etc. Further, the key features of the planned Integrated Healthcare IT platform (to be hosted on the cloud) – its purpose, architecture, inter-operability, scalability, use by both public & private sectors (on user charges basis for private sector) etc. - were highlighted. He mentioned that the costing in the DPR covers public sector facilities and users only, based on normative parameters & detailed workings in line with the pan-India number of health facilities/hospitals. He also mentioned that in order to ensure efficiency of operations, need for a 'special purpose vehicle' to provide implementation support was strongly felt and had been proposed in the EFC. Nasscom-NatHealth Joint Council (NNJC) has also suggested similar SPV structure (for central healthcare IT platform), though shareholding & management structure details are yet to be furnished.

5. JS(eGov) further mentioned that the Health MMP had been broadly supported by DeitY, Niti Ayog and Department of Expenditure; however both D/o Expenditure & NITI AYOG have suggested that the MMP should be aligned with the existing CSS of health and funding should be tied-up may be under NHM. He also briefed that in the EFC Memorandum, exploring option of loan under IDA, World Bank had been mentioned, however no formal discussion in this regard had been held so far.

6. Thereafter, Secretary(HFW) talked about the presentation on NHM made to Hon'ble PM on 09.06.15, wherein the vision & goals of Health MMP were also briefly mentioned and the need for an initiative like this was appreciated. However, the funding of the MMP needs to be tied-up. As of now, the MMP's implementation has been planned in two phases- three states in phase 1 & remaining in phase 2- so that the funding requirement is manageable and also before pan-India implementation, results are demonstrated in pilot states. He mentioned that the need for integrated healthcare IT platform, facilitating inter-operability & data exchange, had been strongly felt by different quarters including private sector. NNJC's proposal is based on the similar lines and also highlights the criticality of private sector participation in some manner. Secretary(HFW) then requested the participants to share their views and suggestions on roll-out of MMP's in an effective and manageable way.

7. Shri Tapan Ray, Additional Secretary (DeitY) stated that the Health MMP was very much needed and detailed planning had already been done. The MMP is aligned with E-Kranti principles and now MoHFW should go ahead with the roll-out of Health MMP, in a suitably phased / modular manner. He mentioned that development of a common integrated healthcare IT platform, which is scalable, interoperable & compliant to standards, could be starting point for the roll-out.

8. Regarding observation by DeitY on SNOMED CT not being an open standard, it was clarified that MoHFW had taken a decision to adopt SNOMED-CT as one of the notified EHR Standards based on the technical merits of using the same and with concurrence of DeitY and CDAC. After

India became member of IHTSDO (the agency managing SNOMED-CT development, distribution and support worldwide) in 2014, it has been decided that all users, including private healthcare providers, can use SNOMED CT free in India.

9. Shri Arunish Chawla, JS(PF-II), D/o Expenditure stated that D/o Expenditure was fully supportive of the Health MMP; however no new CSS (other than those included in the list of 66 CSSs) may be introduced and no new body may be set up. He suggested that the funding for the MMP could be sought under the Digital India program since E-Kranti- one of the pillars of Digital India- focuses on eHealth services covered by the MMP. He also mentioned that MoHFW should emphasise upon adoption of standards/Metadata, integrated MIS etc. and must move ahead with creating an integrated Health IT Platform, which could be leveraged by public health sector and later on, private health sector could also be brought on-board.

10. Regarding setting up of National eHealth Services Corporation for Health MMP implementation, JS(eGov), DoHFW clarified that need for such a body was strongly felt for handholding & implementation support to states and had been proposed to be set up with shareholding from both public (centre and states in equal measure) & private in mix of 49% & 51% respectively. Goods & Services Tax Network (GSTN), set up on similar lines, is already functioning well.

11. Thereafter, Secretary(HFW) stated that for effective and efficient implementation of the planned project activities, setting up of a dedicated

structure/body (may be with participation from private sector) was required.

12. Dr. Jagdish Prasad, DGHS suggested that Health MMP should be implemented in a phased manner. MoHFW might examine the possibility of implementing one pillar (like Public Health System) pan-India, out of the five pillars/areas identified under the MMP.

13. Shri Sanjiv Mital, CEO, NISG mentioned that it would be useful to develop the integrated health IT platform and have it rolled out in a state by hosting on cloud. This would then help demonstrate the working the platform in field operating conditions and it's ease of use; then it would become easier for other states to adopt the platform in a shorter time-frame.

14. Shri Manoj Jhalani, JS (Policy), DoHFW agreed with the idea of creating an integrated health IT platform and suggested that some budgetary support could be provided under NHM for roll out of the mission mode project like for hardware, training, capacity building etc. in facilities of States/UTs.

15. Shri C. K. Mishra, AS&MD(NHM), DoHFW mentioned that extending funding support under NHM for roll out of Health MMP may not be feasible.

16. JS (eGov) also apprised the participants about the status of setting up of NeHA. He stated that various comments/suggestions on NeHA Concept Note had been received and were being examined. Most of the suggestions mentioned about the need for NeHA to be set up as a statutory body. He further mentioned that a national level consultation was proposed

to deliberate on the comments/suggestions and refine the concept note so that it can be used as the basis for drafting the legislation to set up NeHA as a statutory body. He also stated that pursuant to the recommendation of the legal sub-group under EMR/EHR standards committee under chairmanship of AS&DG(CGHS), DoHFW had decided to prepare a draft legislation for health data privacy & security and had accordingly sought involvement of an institution of repute in drafting the legislation. Four institutes namely IIT, Kharagpur; NALSAR, Hyderabad; NLSUI, Bangalore & ILS, New Delhi have been contacted for EoI. The envisaged legislation would entail setting up of NeHA as enforcing body for the Act.

17. Based on the detailed discussions, the following decisions were taken by the Steering Committee:

a) Development of an integrated health IT platform (supporting the envisaged architecture, having scalable properties and supporting compliance with IT and EMR/EHR standards of DeitY and MoHFW respectively and thus enabling interoperability) may be taken-up first, paving the way for phased implementation of the MMP. In this regard, a note with the budgetary outlay may be prepared for approval.

b) States may be encouraged to allocate enough funds from their healthcare budget for adoption and roll-out of Health MMP in their respective states, leveraging the integrated health IT platform.

c) Discussions with World Bank may be taken up to explore the option of funding for implementing health MMP in 3-4 pilot states.

d) National consultation may be held to deliberate upon the comments / suggestions received on the Concept Note for setting up of NeHA.

e) Considering the need of privacy and security of the health data, MoHFW may continue with the task of drafting a legislation for Health Data Privacy & Security which may also entail provision for setting up NeHA.

The meeting concluded with a vote of thanks to the chair & the participants.

Annexure-A

1. Dr. Jagdish Prasad- DGHS, MoHFW
2. Sh. Vikas Garg- Spl. Secretary (Health & Family Wefare) Chandigarh, Punjab
3. Sh. Tapan Ray- AS, DeitY
4. Sh. N.S. Kang- AS & DG, CGHS, MoHFW
5. Sh. C.K. Mishra- AS & MD, MoHFW
6. Dr. Arun K Panda- AS(H), MoHFW
7. Sh. Arunish Chawla- JS(Expenditure), Ministry of Finance
8. Sh. Manoj Jhalani- JS (Policy), MoHFW
9. Dr. Rakesh Kumar- JS(RCH), MoHFW
10. Sh. N.B. Dhal- JS, MoHFW
11. Sh. Sunil Sharma- JS, MoHFW
12. Dr. N.K. Dhamija- Dy. Commissioner(Training and Telemedicine) MoHFW
13. Dr. S.K. Thirunavukarasu- Deputy Director, TNHSP HMIS, Govt of Tamil Nadu
14. Sh. Sunil Kumar- Senior Technical Director (NIC), MoHFW
15. Sh. Sanjeev Mital- CEO, NISG
16. Sh. Sudhir Saxena- VP, NISG
17. Sh. S. Rama Krishnan- Adviser, NISG
18. Sh. Praveen Srivastava- JD, CDAC
19. Sh. Chandrasen- PL, ePMU, MoHFW
20. Sh. Bhanu Prakash- Consultant, ePMU, MoHFW
21. Sh. Nikhil, Functional-Consultant ePMU, MoHFW

Receipt No : 261245/2016/E-GOV

File No. Q- 11013/1/2015- eGov

Government of India

Ministry of Health & Family Welfare

(eGovernance Division)

Nirman Bhawan, New Delhi

Dated 19th August, 2015

OFFICE MEMORANDUM

Subject: Minutes of the Steering Committee Meeting on E-Health held on 27th July, 2015.

A meeting of the Steering Committee on E-Health under the Chairmanship of Shri B.P. Sharma, Secretary (HFW) was held on 27th July 2015 to discuss the comments/ suggestions received from NITI AYOG, D/o Expenditure and D/o E & IT on the Health MMP EFC Memorandum.

2. The Minutes of the aforesaid meeting are enclosed herewith for your kind perusal please.

(Jitendra Arora)
Director, MoHFW
Telephone: 23062317

To

1. Shri B.P. Sharma, Secretary (HFW)
2. Dr. Jagdish Prasad- DGHS, MoHFW
3. Sh. Vikas Garg- Spl. Secretary (Health & Family Wefare) Chandigarh, Punjab
4. Sh. Tapan Ray- AS, DeitY
5. Sh. N.S. Kang- AS & DG, CGHS, MoHFW
6. Sh. C.K. Mishra- AS & MD, MoHFW
7. Dr. Arun K Panda- AS(H), MoHFW
8. Sh. Arunish Chawla- JS(Expenditure), Ministry of Finance
9. Sh. Manoj Jhalani- JS (Policy), MoHFW
10. Dr. Rakesh Kumar- JS(RCH), MoHFW
11. Sh. N.B. Dhal- JS, MoHFW
12. Sh. Sunil Sharma- JS, MoHFW
13. Dr. N.K. Dhamija- Dy. Commissioner(Training and Telemedicine) MoHFW
14. Dr. S.K. Thirunavukarasu- Deputy Director, TNHSP HMIS, Govt of Tamil Nadu
15. Sh. Sunil Kumar- Senior Technical Director (NIC), MoHFW
16. Sh. Sanjeev Mital- CEO, NISG
17. Sh. Sudhir Saxena- VP, NISG
18. Sh. S. Rama Krishnan- Adviser, NISG
19. Sh. Praveen Srivastava- JD, CDAC
20. Sh. Chandrasen- PL, ePMU, MoHFW
21. Sh. Bhanu Prakash- Consultant, ePMU, MoHFW
22. Sh. Nikhil, Functional-Consultant ePMU, MoHFW

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No.Z-28015/1/2016-Estt.I
Government of India
Ministry of Health & Family Welfare
(Department of Health & Family Welfare)
Nirman Bhawan, New Delhi
Dated : 08.01.2016

OFFICE MEMORANDUM

Sub: Minutes of the meetings taken by Secretary (H&FW) with Senior Officers on 31.12.2015 and 04.01.2016.

The undersigned is directed to circulate the Minutes of the meetings taken by Secretary (HFW) with Senior Officers on **31.12.2015 and 04.01.2016** for information and appropriate action.

2. This issues with the approval of Secretary (H&FW).

(A K Singh)
Under Secretary to the Govt. of India
Tel : 2306 1323

Encl.: a/a

To :-

1. DGHS, Spl. DGHS
2. AS & MD (NHM), AS & DG (CGHS), AS & FA, AS (H), AS (KBD) and Addl. DG (Stats.)
3. All Joint Secretaries, CCA, Economic Advisor, Director (CGHS) and DG&CEO (CMSS)
4. DS (Admn.)
5. Advisor (Parliament).

Copy for information to:

PS to Secretary (HFW)

AD(eGov)
on file
11/1/16

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Minutes of the Meeting of Secretary (HFW) with Senior Officers on 31st December, 2015

A meeting of the Senior Officers was chaired by Secretary (H&FW) on **31.12.2015 at 10:00 A.M.** The list of participants is given at Annexure.

1. EXPENDITURE

1.1 The overall expenditure as on 30.12.2015 was 73.58% of the Annual Budget (72.21% - Plan; 80.17% - Non-Plan). With regard to NHM, the overall expenditure was 78.09%. Secretary (HFW) expressed satisfaction over the pace of expenditure.

1.2 Issue of release of ₹ 35 crore allocated for tertiary care under Mental Health Programme was also discussed and Secretary desired to finalize the release proposals expeditiously.

2. OTHER MATTERS

2.1 AS&FA flagged the issue of details of consultants engaged in this Ministry for furnishing to the Department of Expenditure.

2.2 AS&FA also flagged the requirement of Department of Expenditure for furnishing detailed information with respect to foreign tours undertaken by the officers of this Ministry.

2.3 Updating the issue of recruitment of Persons with Disabilities, EA informed that a meeting with all the organizations has been scheduled on 18.01.2016 to review the position.

2.4 Secretary (HFW) referred to the oral evidence before Petition Committee scheduled on 05.01.2016, in the matter of the withheld payment of a security agency by LHMC, and desired for updated status of the case.

2.5 It was informed that the Annual Reports of 17 autonomous institutions could not be laid on the table of both the Houses in the Winter Session. Secretary (HFW) desired to take appropriate action to ensure laying of the Annual Reports in the next session of Parliament.

2.6 AS (H) flagged the issue of revision of recruitment rules as requested by UPSC, to draw attention of all the JSs towards the issue and for furnishing of requisite information to UPSC in the prescribed proforma in the time bound manner.

3. AS (KBA) briefed the Secretary (HFW) about goal and objectives envisaged for eHealth initiatives by the Ministry. This was followed by a presentation by JS (SS) on the detailed plan encompassing ongoing and envisaged initiatives, plan – target & timeline, financials and the challenges to be addressed for effective and efficient implementation of eHealth. Following decisions were taken in the meeting:

3.1 Web portal for online application & generation of 'National Identification Number (NIN)' to health facilities' may be launched in March 2016.

3.2 Revision of EHR Standards may be made.

3.3 Selected hospitals having successfully implemented EMR/EHR System may be visited for study of the system.

3.4 CDAC, Pune may be impressed upon for early release of SNOMED CT and its wider adoption in the country should be targeted.

3.5 Drafting of 'Legislation for Electronic Health Data Privacy & Security' may be completed with a timeline by June 2016.

3.6 For implementation of 'Integrated Health Information Platform (IHIP)' pilot of health information exchange between hospitals and test bed for interoperability may be carried out and be completed in 6 months i.e. by June 2016. NIC may be assigned to undertake the tasks related to the interoperability test bed. For this NIC may be provided with required resources, such as manpower, office space & financials.

3.7 Online Registration System (ORS) should be up-scaled targeting atleast 35 hospitals by May 2016. DGHS may push up implementation of ORS in all the central government hospitals in Delhi by March 2016.

3.8 Cloud based 'e-Hospital' application by NIC may be promoted for adoption by more number of hospitals and health facilities. Further efforts may be made by NIC to incorporate more modules in Cloud based 'e-Hospital' application (such as lab, pharmacy, clinical functions, blood bank etc.) latest by April 2016.

3.9 Status of e-Office implementation in the Ministry was also reviewed and it was desired to provide handholding for 'e-Office' implementation in different divisions of the Ministry. 15 persons may be hired for the purpose through NISG/NICSI. Providing of Digital signatures to all officials and other requisites may also be taken care so as to start e-Office without further delay.

3.10 Arrangements for launch of 'Online Clinical Trial Application Management System' by Hon'ble HFM, may be made at the earliest.

3.11 It was also decided that an appropriate mechanism may be formulated so as to ensure compliance/adherence to the various relevant standards, policies and guidelines while IT applications are developed and implemented by the different programme divisions of Ministry. e-Governace Division may provide a checklist to different Programme Divisions for compliance/incorporation of requisite features in this regard and a technical person from e-Gov. Division/NIC-Health may be associated for ensuring compliance.

3.12 All the e-Governance initiatives under different divisions of the Ministry may be compiled and submitted to Secretary (HFW) by March 2016.

The meeting ended with a vote of thanks to and from the Chair.

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Receipt No : 261272/2016/E-GOV

Annexure

List of participants in Senior officers meeting taken by Secretary(H&FW) on 31.12.2015 at 10:00 a.m.

Sl. No.	Name	Designation
Shri Bhanu Pratap Sharma, Secretary (HFW) - In Chair		
14.	Dr. Jagdish Prasad	DGHS
15.	Dr. B. D. Athani	Spl. DGHS
16.	Shri C. K. Mishra	AS&MD
17.	Shri N.S. Kang	AS&DG
18.	Smt. Vijaya Srivastava	AS&FA
19.	Dr. Arun Kr. Panda	AS(H)
20.	Shri K. B. Agrawal	AS
21.	Shri Anshu Prakash	JS
22.	Shri Manoj Jhalani	JS
23.	Shri Ali R. Rizvi	JS
24.	Dr. Rakesh Kumar	JS
25.	Shri Sunil Sharma	JS
26.	Shri K. C. Samria	JS
27.	Shri K. L. Sharma	JS
28.	Shri. N B Dhal	JS(M/o Mines)
29.	Dr. Shakuntla	CCA
30.	Smt. Sheela Prasad	EA

IHIP Cost Estimate – (Draft)

In line with the Draft Concept Note, the costs involved in implementation & operations of IHIP have been estimated basis a set of assumptions as outlined below.

- **Implementation coverage**
  - 2016 will be preparatory year for fine-tuning & detailing of business model, development of software, putting in place hardware, setting up of team, implementing agency, setting up of office, initial capacity building etc.
  - In 2017, 3 states will be selected for pilot and it will be carried out in 3 selected districts in each of these 3 states
  - Number of states & districts to be covered will be gradually increased to achieve pan-India coverage by 2020

	Y1	Y2	Y3	Y4	Y5
	(2016)	(2017)	(2018)	(2019)	(2020)
	preparatory year	pilot year	roll out year	roll out year	expansion year
Total no. of states covered	-	3	10	20	36
No. of districts covered per state	-	3	10	15	18
Total no. of districts covered	-	9	100	300	660

- **Overall cost estimate (Rs. Cr.)**
  - Total cost estimate is around Rs.285 Cr over 5 years (break up in Table below)
    - Out of total, around Rs.12 Cr is Non-recurring e.g. Capex for hardware, software, office set-up
    - Total recurring cost is around 274 Cr

	Y1 (2016)	Y2 (2017)	Y3 (2018)	Y4 (2019)	Y5 (2020)	
Cost estimate						
Non-recurring:						
Hardware	2.08	0.09	0.12	0.17	0.28	
Software	8.00	-	-	-	-	Software for exchange
Office set-up cost	0.07	0.04	-	-	-	
Recurring:						
Hosting (Cloud) charges	-	1.27	14.06	42.19	92.80	
Connectivity charges	-	5.63	5.63	5.63	5.63	Taken only for pilot districts. It has been assumed that for remaining states/districts, connectivity charges would be borne by respective states.
Licensing cost (OS, DBMS etc.)	0.01	0.03	0.05	0.08	0.13	Cost of OS licence @ Rs.10000 per desktop per annum
AMC of software & hardware			1.81	1.82	1.83	Starts after expiry of first year under warranty
Manpower	3.18	5.95	8.82	12.93	19	
Travel & Misc.	0.18	0.39	0.66	1.05	1.68	
Capacity building	0.50	1.00	1.00	1.00	1.00	
Admin. @ 5%	0.17	0.66	1.55	3.18	6.08	
Contingency @ 10%	1.37	1.41	3.27	6.70	12.79	
TOTAL	**15.60**	**16.56**	**37.08**	**74.85**	**141.79**	
Non-recurring	***11.16***	***0.15***	***0.13***	***0.19***	***0.30***	
Recurring	***4.44***	***16.42***	***36.94***	***74.66***	***141.49***	
Cumulative	**15.60**	**32.16**	**69.24**	**144.09**	**285.89**	
Non-recurring	***11.16***	***11.31***	***11.44***	***11.63***	***11.93***	
Recurring	***4.44***	***20.86***	***57.80***	***132.47***	***273.96***	

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eGovernance Division

MoHFW

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Subject: Consultation with States/UTs on eGovernance Initiatives held on 2nd November, 2015

1. A full day consultation was held with select states/UTs on eGovernance initiatives in the respective states/UTs, in MoHFW, Nirman Bhawan, New Delhi on 2nd November 2015 under the chairmanship of Shri. K.B. Agarwal, Additional Secretary (eGovernance) from 9.30 A.M in Room No.249, A-wing). The list of participants is provided at **Annexure I**.

2. The objective of this consultation was to understand the current status of the eGovernance initiatives in the states/UTs, to facilitate sharing of experience among states, to take learning and identify the good solution(s) for replication/adoption elsewhere.

3. The representatives from states/UTs made detailed presentations on various eGovernance initiatives being implemented in the respective states/UTs, followed discussion/deliberation covering aspects like beneficiary coverage, outcomes, conformance to (eGovernance and Health IT) standards, protocol for privacy & security of data, challenges faced, learning etc.
4. Shri Sunil Bhushan, STD,NIC briefed the participants regarding the requirement of unique identification number to be assigned to each and every health facilities in the country in order to facilitate interoperability between different health IT systems. He further mentioned that MoHFW was working in this direction for creation and assigning National Identification Number (NIN) to health facilities, which is in conformance with Metadata & Data Standards by DeitY.

5. The representative from ESI Corporation, Shri S K Garg, Additional Commissioner, ESIC made a presentation on Hospital Information System implemented in the Corporation and shared its experience/learning. He highlighted the practices being followed in the Corporation for creation of EMR and sharing of medical records between the network hospitals & dispensaries.

6. Shri Jitendra Garg, General Manager, BBNL briefed the participants about the plan of NOFN (now being restructured as Bharat Net) and its current status. He mentioned that as on date NOFN has been operationalized in the states of

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Karnataka, Kerala, Pondicherry & Chandigarh. Further, he requested MoHFW to delineate its requirements in terms of bandwidth at the different levels of usage.

7. After detailed deliberation, the following decisions were taken:

a) States may involve research institutions and academia in health data analytics.

b) States should endeavor to ensure assignment of Unique IDs to health facilities, practitioners and patients, which is one of the key requirements for establishing interoperability between different Health IT systems.

c) Shri Sunil Bhushan, STD, NIC may draft a note on NIN (including roles of centre and states) to be circulated to states/UTs for feedback/suggestions.

d) Shri Sunil Bhushan, STD, NIC may facilitate the States/UTs in adopting/ roll-out of eHospital (cloud-based application) and Online Registration System (ORS) in hospitals/health facilities in their respective states.

e) A committee may be constituted for discussion/deliberation on how MoHFW can leverage NOFN / Bharat Net connectivity for service delivery. The committee may include the following participants:

i. Joint Secretary (eGovernance)

ii. Representative from NIC

iii. Representatives from the states of Chhattisgarh, Chandigarh, Kerala & Karnataka

iv. Director (eGovernance)

v. Director (Telemedicine)

vi. Director (Statistics)

f) A pilot project for integrating TB program with ASHA Soft application may be undertaken in Rajasthan. Shri. Sunil Bhushan, STD, NIC along with officials from Central TB Division, MoHFW, New Delhi may coordinate with Mission Director, Rajasthan to finalize the other details in a time bound manner.

g) The representative of Tamil Nadu may share the project details of State Health Data Resource Centre with eGovernance Division of MoHFW.

h) Shri. Suptendra Sarbadhikari, PD, CHI may upload the presentations made by the various states/UTs on the National Health Portal and provide the required links on NHP to states' portal for details on the eGovernnace initiatives.

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Annexure I : List of participants

S.No	Name	Designation	Official Address	E-mail id
1.	Shri K.B. Agarwal	AS (eGov)	MoHFW	Asfnd.kb@gmail.com
2.	Shri Sunil Sharma	JS (eGov)	MoHFW	Sunil.sharma62@gov.in
3.	Shri Ayyaj Tamboli	MD NHM Chhattisgarh	Indrawali Bhawan, Naya Raipur	ayyajtamboli@yahoo.com
4.	Shri Naveen Jain	MD, NHM	NHM Building jaipur	N_j2@rediffmail.com
5.	Shri S K Garg	Additional Commisioner	ESIC HQ, New Delhi	Sk.garg@esic.in d.lahiri@esic.in
6.	Dr. M Senthil Kumar	DD (NRHM)	NHM- Tamil Nadu, Chennai	Srhm.tn@nic.in trainingsrhm@gmail.com
7.	Shri B Rajasekhara Reddy	Dy. Director	O/o Commissioner, HFW, Hyderabad, Andhra Pradesh	ddmiscfw@gmail.com
8.	Dr. Manoj Yadu	GM(MIS)	SPMIS, NHM-UP	gmmisnrhm@gmail.com
9.	Shri Jitendra Garg	GM(BD)	BBNL	gmbdcor@gmail.com
10	Shri Sunil Kumar	Senior Technical Director	NIC, MoHFW	sunil.bhushan@gov.in
11	Dr. Sunil R. Avashia	Additional Director	Com of health	Adddir.mediser@gujrat.gov.in
12	Dr. Badri Vishal	Additional Director,Medical Care	DGMS office UP	Director.medical.care.up@gmail.com Badreevishaal@gmail.com
13	Ms Sunita Dhaundiyal	Under Secretary(eGov	Room No 502-D Nirman Bhawan	sunitadhaundiyal@gmail.com

S.No	Name	Designation	Official Address	E-mail id
14	Shri S. N. Sarbadhikari	Project Director, CHI of NHP	NIHFW, Munirka New Delhi	Supten@gmail.com
15	Shri Ankit Tripathi	Additional Director	NIHFW	at@nihfw.org
16	Shri Kartikeyan Loganathan	ICT Specialist	TSU, Lucknow, UP	Kartikeyan.l@ihat.in
17	Shri R. Palanivelan	Assistant Director	NHM- Tamil Nadu, Chennai	Srhm.tn@nic.in
18	Shri Pankaj Rahi	State programme manager, IT and HMIS	O/o MD, NHM, DHS, Chandigarh	Mdnrhm-chd@gmail.com
19	Shri Chandrasen	Project Lead	517 D Nirman Bhawan	chandrasens@deloitte.com

Receipt No : 261272/2016/E-GOV

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Subject: **Seeking comments on the Draft Concept note on IHIP**

Date: 11/20/15 06:33 PM

From: "Amit Kumar" <amit.k89@gov.in>

To: cohealth@gujarat.co.in, phsrajasthan@gmail.com, hfwsec@gmail.com, prs-hfw@karnataka.gov.in, prl.secy.hmfwap@gmail.com, poonam.malakondaiah@gmail.com, sheelv@nic.in, psecup.health@gmail.com, secy.hlth@kerala.gov.in, secy@health.kerala.gov.in, hs-chd@nic.in

Cc: JITENDRA ARORA DIRECTOR <jitendra.arora@gov.in>, dir.ehealth@gmail.com, Sunita Dhaundiyal <sunita.dhaundiyal@nic.in>, nimalhotra@deloitte.com, bhanuprakash@deloitte.com, chandrasens@deloitte.com

DO letter to States for Draft Concept note on IHIP... (402kB)
Integrated_Health_Information_Platform_Concept_Not... (883kB)

Respected Sir/Madam

It is proposed to set up 'Integrated Health Information Platform' (IHIP) for the purpose of facilitating better health services to citizens, improve efficiency for healthcare services and health programmes by optimum utilization of resources, availability of information/ data - in secure manner and on real time basis - through integration of systems to ensure a comprehensive EHR Solution.

A D.O letter from Shri Sunil Sharma, JS (eGov) along with the draft concept note on setting up of IHIP is attached herewith. You are requested to offer the comments of the State Govt on the Concept Note by 27th November, 2015 to enable the Ministry to take further necessary actions.

Regards
Amit Kumar
Assistant Director (eGovernance)
Ministry of Health & Family Welfare
Room No. 425C
Nirman Bhawan
New Delhi – 110 011
Tel: 011 – 2306 2263
Mobile: 9582861973

Receipt No : 261272/2016/E-GOV

85

Subject: **DO letter to States for Draft Concept note on IHIP**

Date: 11/20/15 06:23 PM

From: Ashish Sharma <ashish.sharma91@gov.in>

To: Supten@gmail.com, supten@nihfw.org, at@nihfw.org, gmbdcor@gmail.com, Adddir.mediser@gujrat.gov.in, Director.medical.care.up@gmail.com, Badreevishaal@gmail.com, gmmisnrhm@gmail.com, Kartikeyan.l@ihat.in, chandrasens@deloitte.com, Sk.garg@esic.in, d.lahiri@esic.in, ddmiscfw@gmail.com, srhm.tn@nic.in, trainingsrhm@gmail.com, srhm.tn@nic.in, N_j2@rediffmail.com, Mdnrhm-chd@gmail.com, ayyajtamboli@yahoo.com

Cc: JITENDRA ARORA DIRECTOR <jitendra.arora@gov.in>, dir.ehealth@gmail.com, Sunita Dhaundiyal <sunita.dhaundiyal@nic.in>, Amit Kumar <amit.k89@gov.in>, nimalhotra@deloitte.com, bhanuprakash@deloitte.com

DO letter to States for Draft Concept note on IHIP... (845kB)
Integrated_Health_Information_Platform_Concept_Not... (883kB)

Respected Sir/Madam

It is proposed to set up 'Integrated Health Information Platform' (IHIP) for the purpose of facilitating better health services to citizens, improve efficiency for healthcare services and health programmes by optimum utilization of resources, availability of information/ data - in secure manner and on real time basis - through integration of systems to ensure a comprehensive EHR Solution.

A D.O letter from Shri Sunil Sharma, JS (eGov) along with the draft concept note on setting up of IHIP is attached herewith. You are requested to offer your comments on the Concept Note by 27th November, 2015 to enable the Ministry to take further necessary actions.

Regards

Ashish Sharma
Assistant (eGov)
MoHFW (011-23062263)

Receipt No : 261272/2016/E-GOV

Sunil Sharma, IRPS
Joint Secretary

सत्यमेव जयते

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
निर्माण भवन, नई दिल्ली - 110108
Government of India
Ministry of Health & Family Welfare
Nirman Bhavan, New Delhi - 110108
Tel. : +91-11-23061773
Fax : 91-11-23062157
E-mail : sunil.sharma62@gov.in

D.O. No. Q-11013/3/2015-eGov

Dated the 18 November, 2015

Dear Sir/Madam,

It is proposed to set up 'Integrated Health Information Platform' (IHIP) for the purpose of facilitating better health services to citizens, improve efficiency for healthcare services and health programmes by optimum utilization of resources, availability of information/ data – in secure manner and on real time basis – through integration of systems to ensure a comprehensive EHR Solution.

The key issues envisaged to be addressed are as under:

- Fragmented information streams/ systems
- Quality of data
- Large volume of data collected
- Duplication of data collection- Data Redundancy
- Sub- optimal resource utilization due to duplicate information systems
- Lack of interoperability and accessibility of information
- 'Push' vs. 'Pull' model of data sharing

A copy of the Concept Note on setting up of IHIP is enclosed herewith.

I would like to request you to offer the comments of the State Govt on the Concept Note by 27th November, 2015 to enable this Ministry to take further necessary actions.

With regards,

Yours Sincerely,

(Sunil Sharma)

साधारण डाक द्वारा
BY ORDINARY POST

स्पीड पोस्ट द्वारा
BY SPEED POST

परिवार कल्याण मंत्रालय जारी किया 20 NOV 2015 ISSUED MINISTRY OF HEALTH & FW

Encl: As above

Principal Secretary of Gujarat, Rajasthan, Tamil Nadu, Karnataka, Andhra Pradesh, Chhattisgarh, Uttar Pradesh, Kerala, Chandigarh.

Pls issue & I
By speed post
20-11-15

NATIONAL HEALTH MISSION
राष्ट्रीय स्वास्थ्य मिशन

National Health Mission

Receipt No : 261272/2016/E-GOV

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Copy to:

S.No	Name	Designation	Official Address
01.	Ayyaj Tamboli	MD NHM Chhattisgarh	Indrawali Bhawan, Naya Raipur
02.	Naveen Jain	MD, NHM	NHM Building jaipur
03.	S K Garg	Additional Commisioner	ESIC HQ, New Delhi
04.	Dr. M Senthil Kumar	DD (NRHM)	NHM- Tamil Nadu, Chennai
05.	B Rajasekhara Reddy	Dy. Director	O/o Commissioner, HFW, Hyderabad, Andhra Pradesh
06.	Dr. Manoj Yadu	GM(MIS)	SPMIS, NHM-UP
07.	Shri Jitendra Garg	GM(BD)	BBNL
09.	Shri Sunil Kumar	Senior Technical Director	NIC, MoHFW
10.	Dr. Sunil R. Avashia	Additional Director	Com of health
11.	Dr. Badri Vishal	Additional Director,Medical Care	DGMS office UP
12.	Shri S. N. Sarbadhikari	Project Director, CHI of NHP	NIHFW, Munirka New Delhi
13	Shri Ankit Tripathi	Additional Director	NIHFW
14.	Kartikeyan Loganathan	ICT Specialist	TSU, Lucknow, UP
15.	R. Palanivelan	Assistant Director	NHM- Tamil Nadu, Chennai
16.	Pankaj Rahi	State programme manager, IT and HMIS	O/o MD, NHM, DHS, Chandigarh

(Jitendra Arora)
Director(eGovernance)
Ph No. 23062317

Receipt No : 261276/2016/E-GOV

Q-11013/3/2015-eGov

FTS: 148995

Government of India
Ministry of Health & Family Welfare
(eGov Division)
****

Subject : **Setting up of 'Integrated Health Information Platform' – Concept Note reg.**

During the last two years, a detailed exercise had been undertaken for scoping and preparation of project report for comprehensive adoption of ICT in Indian Healthcare under Health MMP – aligned with Digital India Programme and eKranti (NeGP 2.0). It emphasised primarily upon the need for integration of and interoperability amongst various health IT systems and creation of Electronic Health Records(EHRs) of citizens along with pan India exchange.

2. Creation of EHRs of citizens and establishment of supporting infrastructure/ mechanism for exchange of health records emerges as one of the key focus areas under the pan for comprehensive use of ICT in healthcare. Accordingly, in the meeting of Steering Committee on E-Health under the chairmanship of Shri B.P. Sharma, Secretary (HFW) held on 27th July 2015, it was deliberated and decided to establish an 'Integrated Health Information Platform' primarily focusing on interoperable EHRs and subsequently to encompass other key components of eHealth, as feasible like Drug Supply Chain management Citizen portal etc. as underlined in Health MMP DPR.

3. In view of the above, a draft concept note on Integrated Health Information Platform has been prepared and is placed below for your kind perusal/ approval please.

3/9/15
Amit Kumar
AD(eGov)

~~US(eGov)~~

3/9/15

~~Dir(eGov)~~

JS may kindly approve the draft Concept Note on IHIP

3/9/15

~~JS(AMD)~~

Noted above.

The draft concept note is similar to the proposal put forth by NATHEALTH Joint Council (NNJC) ~~some~~ few weeks ago. Detailed costing has not been done yet. However, it the proposed SPV is fully funded by the Government, approx ₹ 140 Crore over three years, would be ~~required~~.

P – 2/n →

Receipt No : 261276/2016/E-GOV

– 2/n –

We may seek the comments/Suggestions of DEITY, IHIN (India Health Information Network) at present anchored in FICCI, NASSCOM, HLSL & selected 8-10 states for on the draft Concept Note, Please.

3/9

AS (CBT) Pl. discuss. 7/9/15

Dir(JA)

Secretary

Discussed on 10/9/15.

Pl link the papers/files for IHIN, Nasscom meeting etc.

10/9/15

US/(eGov)

10/9/15

AD(eGov)

As desired minutes of 1st meeting of India Health Information Network (IHIN) is placed at 'F/X'.

2. ~~Two~~ Files (File No- R-14012/16/2014-eGov) regarding setting up of IHIN & (File No V-11011/2/2014-eGov) regarding Meeting with NASSCOM are also linked.

US(eGov)/Dir(eGov) 16/9 16/9/15

US/eGov Make a self carbon Note 17/9/15 AD(eGov) 16/9/15

Q-11013/3/2015-eGov
FTS: 148995

Reference Dir(eGov)'s remarks on pre-page

2. This is regarding draft concept Note for setting up of Integrated Health Information Platform consequent to the decision taken in the meeting of the Steering Committee on e-Health held on 27.07.2015 for deciding the future roadmap of Health MMP in view of the comments received from DeitY, D/o expenditure and NITI Aayog on EFC Note for Health MMP.

3. IHIP is proposed to encompass various components like eHealth applications, eHealth Data; and e Health infrastructure. IHIP would be based on model of 'Infrastructure as a Service (IaaS)' i.e. Hiring / availing the required infrastructure on a service based model as per a well defined service level agreement; no need for capex in infrastructure for networking, data centre etc. Business model for IHIP has been envisaged on the basis of a set of guiding principles-asset light platform, hiring infrastructure-as-a-service, offering application-as-a-service, and attaining financial sustainability in due course.

4. IHIP is proposed to be implemented and managed by a Special Purpose Vehicle (SPV)-a dedicated agency-set-up under MoHFW supported with adequate manpower and resources like PMU. It is envisaged to also have additional roles & responsibilities under its purview such as management of National Health Portal(NHP) and secretarial work of the proposed National eHealth Authority(NeHA).

5. The development of the IHIPis envisaged over the first year and initial adoption in a limited set of locations in the next twelve months concurrently. The platform will by then be demonstrably ready for adoption on a large scale. It will provide an optimal approach for progressive roll-out of the platform.

6. The various regulatory aspects like privacy, security, accsee, disclosure, exchange etc. would be taken care by the proposed National eHealth Authority. NeHA would also regulate other specifics like what information to be shared; within what timeline the information should be shared etc. Till the NeHA is set-up, the implementing agency (SPV) would take care of such matters.

7. The immediate way-forward on setting up of IHIP includes:

- Consultation with different key stakeholders-DeitY, Industry Experts, Application/IT Vendors, healthcare providers etc.
- Estimation of cost involved
- Fine-tuning & detailing of Concept Note along with costing
- Preparation of proposal for approval by SFC/EFC

8. The then JS(eGov) had suggested that comments from DeitY, IHIN, NASSCOM, NISG and selected 8-10 States may be taken on the draft concept Note for setting up of Integrated Health Information Platform.

P.1-2/N

9. As regards IHIN, it is mentioned that with a view to increased focus of India on development and implementation of eHealth solutions, India Health Information

Network (IHIN) comprising different organisations/stakeholders in the health care ecosystem was established on 06.01.2015 for sharing of knowledge/experience on development and implementation of e-health solutions, especially EHR. The Network is being serviced by FICCI. The first meeting of IHIN was held on 30th May 2015 at FICCI, New Delhi. The minutes of the same are placed at F/Y.

10. Further, NASSCOM and NATHEALTH had a meeting with Secretary (HFW) and other officers of the Ministry for working together in aligning the priorities and implementation roadmap in Health IT with that of the Government. The meeting was held on 18.10.2014. The identified priorities by NASSCOM-NATHEALTH Joint Council (NNJC) were Creation of central health care IT platform, Remote healthcare, IT-enabled preventive and chronic care management services and Health care workforce- redefining supply side. Minutes of the meeting is placed at p.41-44/C in the linked file V-11011/2/2014-eGov. Subsequently a follow up meeting was held on 5.11.2014 to assess the progress of the four priorities undertaken by NNJC and following priority groups were formed:

180/US(eGov)/15
1/10

Priority Group	Nodal officer from MoHFW
Central health care IT platform	Shri N B Dhal, JS
Remote healthcare	Shri Ali R Rizvi, JS
IT-enabled preventive and chronic care management services	Shri Manoj Jhalani, JS
Health care workforce- redefining supply side	Shri Ali R Rizvi, JS

The Minutes of the meeting is placed at p.49-50/C in the linked file V-11011/2/2014-eGov. After that three meetings were held on 29.12.2014, 13.01.2015 and 30.05.2015 with NASSCOM-NATHEALTH under the chairmanship of Secretary (HFW) to decide the way forward in respect of above priorities.

11. In view of the above, a draft concept note on Integrated Health Information Platform has been prepared and placed at F/X.

Submitted please.

A Kumar
01/10/15

US (eGov)

1/10/15

Dir (eGov)

JS(SS)

A draft concept note on Integrated Health Information Platform (IHIP) prepared as per decision taken in the meeting of Steering Committee on DPR for Health MMP (27.7.15) may please be approved for obtaining comments of stakeholders and other Associations/bodies.

1/10/15

JS(SS)

AS (KBS)

As part of the stakeholders consultation process, a presentation / meeting with 5-6 progressive states has already been planned for 20/10/15. ESIC hospitals may also, perhaps, be taken on board. They have a wide chain of hospitals with 5 crore beneficiary base.

(PTO)

(From page 29)

Presently, the draft concept note may be also be considered for circulation amongst the various stakeholders.

9/10/15

AS (KBA)

The consultation with the States is OK. The draft concept note may be circulated after the consultation.

12/9/15

JS(CC) 12.10.15

Dir (eGov)

US/Pers (V) on leave

AD (eGov)

13/10/15

Receipt No : 261276/2016/E-GOV

Q-11013/3/2015-eGov
~~M-12011/1/2015-eGov(Pt1)~~
FTS: 148995 ~~FTS: 3034427~~

Government of India
Ministry of Health & Family Welfare
(eGov Division)
****

Ref: Previous notes.

~~It is informed by Director (eGov) that~~ A consultation - with Key States to understand the good practices in use of ICT in Healthcare Service Delivery and Management - is proposed to be held on 20.10.2015 for full day starting at 9.30 AM in NIHFW, New Delhi.

2. The key objectives of the proposed consultation are follows:

- To understand eHealth initiatives by state
- To discuss good practices of state
- To take learning for better planning & implementation going forward

3. The State/UTs proposed for this consultation are Gujarat, Rajasthan, Tamil Nadu, Karnataka, Andhra Pradesh, Chhattisgarh, Uttar Pradesh, Kerala and Chandigarh. ESIC may also be invited to attend the consultation.

✓DFA-I
✓✓DFA-II

4. Accordingly, a draft DO letter inviting the States and ESIC to attend the consultation and Information Checklist for consultation on eHealth has been prepared and is placed below for approval please.

Akumar
13/10/15
(Amit Kumar)
AD(eGov)

US(eGov) – on Leave

~~Dir(eGov)~~

JAfsm
13/10/15

~~JS(SS)~~

Another meeting with states is being organised on 2.11.15 for discussing the "National Telemedicine Network" the proposed Concept Note. It would be better if ~~this~~ meeting is clubbed with eGovernance meeting.

JAfsm
13/10/15

~~JS(CS)~~

We may hold/reschedule the meeting/consultation on 2/11/15 as proposed by the (eGov.) May kindly consider.

14/10

~~AS (RBA)~~

As proposed.

14/X

~~JS(SS)~~

JAfsm
14/10/15

15/10

~~US(eGov)~~

AD(eGov)

Receipt No : 261276/2016/E-GOV

Ref. notes on prepage.

As discussed with Dir(eGov), Room no. 249-A, Nirman Bhawan has been booked for national consultation on 2/11/15. Accordingly 2 Fair copies has been prepared & are placed below for signature of JS(SS) pls.

16/10/15

US(eGov) Fair DOs for sign. of JS(SS) pl.

16/10/15

Pl speak

Dir(eGov)

US(eGov)

16/10/15

Spoken. Resubmitted pls. after revising the Draft as per directions.

16/10/15

Dir(eGov)

JS(SS)

16/10/15

17/10/15

Dir (eGov)

US(eGov)

16/10/15

19/10/15

AD(eGov)

We may inform Telemedicine section that their meeting on the Concept Note on NTN has been clubbed with National Consultation organised by eGov Div. on 2.11.15 in MoHFW.

DFA pls.

26/10/15

26/10/15

US(eGov)

AD(eGov)

Ref. notes at p. 6-7/N.

This is regarding the agenda for the Consultation with States on 2/11/2015. The draft agenda has been prepared in consultation with e-PMU Team and is placed below for approval please. So far, 4 States have confirmed over phone their participation / Presence in the meeting. These States are : Gujarat, Rajasthan, Chandigarh & UP.

29/10/15
US(eGov)

Dir(eGov) – O.T.

JS(eGov) – OT.

~~JS (K&S)~~ (L.O.)

29/10/2015

AS(K/BA)

This may be postponed as both JS & Director are out of country & On Nov 2, RE of budget will be discussed in the MOF.

Alternatively, I can hold a small meeting in the AN, after you have discussed in detail in the morning session.

29/10/15

अवर सचिव (e-gov)

Recd. today.

03/11/15

Sh. Ashish

Receipt No : 261276/2016/E-GOV

—9/a1—

File No. Q-11013/3/2015-eGov
FTS: 148995

Reference Notes on P. 3-5/N

2. The consultation with States on Use of ICT in Healthcare Service Delivery was held on 02nd November 2015 in MoHFW under the Chairmanship of AS (KBA). The List of Participants is placed at 'F/A'.

3. With reference to AS (KBA)'s directions on P. 5/N, the draft concept note on Integrated Health Information Platform (IHIP) is placed below for approval and for sending to the attendees of the consultation held on 02.11.2015 for comments please.

Submitted please.

Ashish Sharma 4/11/15
Ashish Sharma
Assistant

AD (eGov) **On Leave**

US (eGov)

Dir (eGov) - OT
JS (eGov)

4/11/15

O.K.
9/11

Dir (eGov)
US/P(eGov)

JT for
10/11/15

AD (eGov)
SO(INT-I)

10/11/15

A draft DO letter is placed below for approval please to send the concept note on IHIP to all the states participated in national Consultation on 2/11/15 & other attendees in the national Consultation.

US (eGov) - o.k.
Dir (eGov) give time up to 27/11

JT for
12/11/15

12/11/15

JS (eGov)

14/11/15

Dir (eGov)
US/P(eGov)

16/11/15

JT for
16/11/15
AD (eGov)

-10-

Ref. notes on prepage.

Fair copy of the DO letter is placed below for signature please.

17/11/15

US(eGov)

17/11/15

Dir(eGov)

The DO letter is being issued to all the concerned.

18/11/15

Receipt No : 261276/2016/E-GOV

Q-11013/3/2015-eGov
FTS: 148995

Subject: Draft Concept Note of Integrated Health Information Platform (IHIP)

This is regarding draft concept Note for setting up of Integrated Health Information Platform consequent to the decision taken in the meeting of the Steering Committee on e-Health held on 27.07.2015 for deciding the future roadmap of Health MMP in view of the comments received from DeitY, D/o expenditure and NITI Aayog on EFC Note for Health MMP.

2. IHIP is proposed to encompass various components like eHealth applications, eHealth Data; and e Health infrastructure. IHIP would be based on model of 'Infrastructure as a Service (IaaS)' i.e. Hiring / availing the required infrastructure on a service based model as per a well-defined service level agreement; no need for capex in infrastructure for networking, data centre etc. Business model for IHIP has been envisaged on the basis of a set of guiding principles-asset light platform, hiring infrastructure-as-a-service, offering application-as-a-service, and attaining financial sustainability in due course.

3. IHIP is proposed to be implemented and managed by a Special Purpose Vehicle (SPV)-a dedicated agency-set-up under MoHFW supported with adequate manpower and resources like PMU. It is envisaged to also have additional roles & responsibilities under its purview such as management of National Health Portal (NHP) and secretarial work of the proposed National eHealth Authority (NeHA).

4. The development of the IHIP is envisaged over the first year and initial adoption in a limited set of locations in the next twelve months concurrently. The platform will by then be demonstrably ready for adoption on a large scale. It will provide an optimal approach for progressive roll-out of the platform.

5. The various regulatory aspects like privacy, security, access, disclosure, exchange etc. would be taken care by the proposed National eHealth Authority. NeHA would also regulate other specifics like what information to be shared; within what timeline the information should be shared etc. Till the NeHA is set-up, the implementing agency (SPV) would take care of such matters.

6. The immediate way-forward on setting up of IHIP includes:

- Consultation with different key stakeholders-DeitY, Industry Experts, Application/IT Vendors, healthcare providers etc.
- Estimation of cost involved
- Fine-tuning & detailing of Concept Note along with costing
- Preparation of proposal for approval by SFC/EFC

7. The then JS(eGov) had suggested that comments from DeitY, IHIN, NASSCOM, NISG and selected 8-10 States may be taken on the draft concept Note for setting up of Integrated Health Information Platform.

8. The draft concept note is similar to the proposal put forth by, NASSCOM-NATHEALTH Joint Council (NNJC) which also identified creation of central health care IT platform as one of the key priorities.

9. Subsequently, a review was taken by AS (eGov) on 17.11.2015 on the various action points regarding eHealth. The meeting was attended by Dir (eGov) and Addl. Director (NHP) along with ePMU team member.

10. In the meeting, Dir (eGov) briefed about IHIP Concept Note and way-forward on it. The progress of the task for design, development & generation of unique National Identification Number (NIN) for health facilities in India was also discussed.

11. Based on the deliberation in the meeting, it was decided to appropriately incorporate the component regarding generation of NIN (along with a phase-wise implementation plan) in the concept note of IHIP, since NIN and IHIP are interlinked i.e. for ensuring interoperability amongst health IT systems at different health facilities (which is the key objective of IHIP) unique identification number needs to be given to each health facilities along with unique identification to patients.

12. Accordingly, the concept note has been revised and put up at F/A.

Submitted for kind information for Secretary (HFW)

11/12/15
(Jitendra Arora)
Dir. (eGov)

JS (SS) Pl also furnish the total financials as discussed

22/12/15

Dir (eGov) As discussed the revised concept note incorporating the Financial sheet is placed on file.

23/12/15

JS(SS) Pl discuss.

Dir(eGov)/Consultant(Sri Chandrasekhar) 1/1/16 Discussed today

ADD(PHM) 5/1/16

Concept Note

Integrated Health Information Platform (IHIP)

Ministry of Health & Family Welfare

November, 2015

Contents

Abbreviations and Acronyms

API	Application Programming Interface
CHI	Centre For Health Informatics
DeitY	Department of Electronics & information Technology
DPR	Detailed Project Report
DSS	Decision Support System
EFC	Expenditure Finance Committee
EHR	Electronic Health Record
EMR	Electronic Medical Record
HIS	Hospital Information System
IaaS	Infrastructure-as-a-Service
ICT	Information & Communication Technology
IHIP	Integrated Health Information Platform
M2M	Machine-to-Machine
MMP	Mission Mode Project
MoHFW	Ministry of Health & Family Welfare
NeGP	National eGovernance Plan
NeHA	National eHealth Authority
NHP	National Health Portal
PMU	Project Management Unit
SFC	Standing Finance Committee

Executive Summary

For effective adoption of ICT in Indian healthcare- aligned with health sector goals under Digital India Programme- need for integration of and interoperability amongst various health IT systems and creation of electronic health records (EHRs) of citizens along with pan-India exchange has emerged critical. The Steering Committee on eHealth – chaired & co-chaired by Secretary (HFW) and Secretary (DeitY) respectively- has decided to establish an 'Integrated Health Information Platform (IHIP)'.

With decentralisation and introduction of disruptive innovations /technologies, the full patient record is in various places - primary care, specialist, hospitals, pharmacy, home health care etc. - that must connect. IHIP would work in the direction to avoid a situation of data getting trapped in multiple silos and to enable EHRs of citizens to be made available and accessible nationwide. This would facilitate continuity of care, confidential & secure health data/records management, better affordability, optimal information exchange to support better health outcome, better decision support system, fewer redundancies & medical errors, low data redundancy, big data analytics etc. A framework of unique identification for patients, providers/health facilities and medical procedures would be incorporated so as interoperability (and thence longitudinal medical record) is attained amongst different health IT systems.

IHIP is proposed to encompass various components like eHealth applications**,** eHealth data; and eHealth infrastructure. Business model for IHIP has been envisaged on the basis of a set of guiding principles - asset light platform, hiring infrastructure-as-a-service, offering application-as-a-service, cafeteria model of service offering on payment basis, and attaining financial sustainability in due course.

IHIP would primarily adopt a model of 'Infrastructure as a Service (IaaS)' i.e. hiring/availing the required infrastructure on a service based model as per a well-defined service level agreement; no need for capex in infrastructure for networking, data centre etc. At backend, Cloud Computing environment would be utilized. However, individual hospitals/healthcare facilities will have to put in the required infrastructure – terminals, peripheral hardware etc. - in their premises in order to access and use IHIP.Tried & tested open source solutions complying with EHR Standards offered by third parties, both public & private IT vendors, would be hosted on IHIP.Various developers including innovative start-ups can host their standards compliant applications/solution-suites on IHIP after due process of evaluation by the Ministry. Users can use the applications taking a 'Cafeteria Approach' i.e. to choose application from available options as per their need.

IHIP is proposed to be implemented and managed byCentre for Health Informatics (CHI) setup by MoHFW and currently managing the operations of National Health Portal (NHP).It has been already approved to register CHI as a 'Society' under MoHFW. The CHI will have additional roles and responsibilities, apart from IHIP and NHP, under its purview such as secretarial work of the proposed National eHealth Authority (NeHA). The CHI will bestrengthened with adequate manpower and resourcesalong with a PMU.

The development of the IHIP is envisaged over one year and initial adoption in a limited set of locations in the next twelve months concurrently. The platform will by then be demonstrably ready for adoption on a large scale. It will provide an optimal approach for progressive roll-out of the platform.

Sustainability of IHIP needs to be addressed properly. For ensuring sustainability is attained, IHIP is planned to explore various possible revenue sources including from health information exchange platform like real-time data services to different healthcare providers, asynchronous data analytics /customized reports for health care analytics organizations etc. However, in short-to-medium term it would require funding assistance from the government, till it achieves a critical mass.

The various regulatory aspects like privacy, security, access, disclosure, exchange etc. would be taken care of by the proposed National eHealth Authority. NeHA would also regulate other specifics like what information to be shared, within what timeline the information should be shared etc.Till the time NeHA is set-up, the implementing agency would take care of such matters.

The immediate to short term way-forward on setting up of IHIP includes:

- Consultation with different key stakeholders – States/UTs, DeitY, India Health Information Network (IHIN), Industry Experts, Application/IT Vendors, Healthcare Providers etc. for fine-tuning & finalisation of the concept note
- Estimation of costs involved in setting up of IHIP once the concept in terms of services, infrastructure elements, business models, business scale & its ramp up etc. is finalised
- Generation of unique National Identification Number (NIN) for Health Facilities& providers (Public and Private) and its implementation in IT systems - **For details on NIN kindly refer Annexure -I**
- Information Dissemination and consultation with States/UTs regarding adoption of UHID as per the notified EHR Standards for India
- Fine-tuning & detailing of Concept Note along with costing
- Preparation of proposal for approval by SFC/EFC

Introduction

This Concept Note outlines objectives, components along with high level architecture, business model, implementation framework, cost elements & estimate etc. for the proposed Integrated Health Information Platform (IHIP). It has been prepared based on DPR of Health MMP, discussions held in meeting of Steering Committee on eHealth, deliberations held with MoHFW's officials/ DeitY/Experts/ Solution Vendors etc., and review of select relevant documents available through desk research.

This Concept Note provides a base document for further discussion with therelevant stakeholders and subsequent fine-tuning & elaboration before it is converted into a proposal for EFC/SFC.

Background

During the last two years, a detailed exercise had been undertaken for scoping and preparation of project report for comprehensive adoption of ICT in Indian healthcare under Health Mission Mode Project (MMP)-aligned with Digital India Programme and E-Kranti (NeGP 2.0). It emphasised primarilyupon the need for integration of and interoperability amongst various health IT systems and creation of electronic health records (EHRs) of citizens along with pan-India exchange.

Creation of EHRs of citizens and establishment of supporting infrastructure/ mechanism for exchange of health records emerges as one of the key focus areas under the plan for comprehensive use of ICT in healthcare. Accordingly, in the meeting of Steering Committee on eHealth held on 27th July, 2015, it was deliberated and decided to establish an 'Integrated Health Information Platform' primarily focusing on interoperable EHRs and subsequently to encompass other key components of eHealth, as feasible, like Drug Supply Chain Management, Citizen Portal etc., as underlined in Health MMP DPR.

Issues to be addressed

It has been observed those healthcare organisations aremostly operating in data-rich but information-poor environment. Patient health data is being gathered / stored - distributed over a number of locations and via a number of IT solutions - which is generally inaccessible, improperly formatted/not standardised and hence not interoperable. System interoperability along with supportive IT frameworks and optimal information exchange to support better healthcare services and thusoutcomes

is the key requirement in the prevailing scenario. Also need is there for transforming data into information and evidence, which could help in decision support systems (DSSs).

Multiple data sources need to be integrated in meaningful ways to improve services in relation to access, quality, user satisfaction and efficiency. With information sharing, volumes of independent sets of data across multiple systems can be brought together in integrated, relevant and useful summary views. Integrated data can be de-identified and aggregated in such a way to enable policy-making decisions at public health level. The current focus is more on "pushing" vs "pulling" data,which often leads to ineffective data sharing and impedes care quality and efficiency impacting outcomes.

Key issuesneed to be addressed
Fragmented information streams/systems
Quality of data
Large volume of data collected
Duplication of data collection – *Data Redundancy*
Sub-optimal resource utilisation due to duplicate information systems
Lack of interoperability & accessibility of information
Lack of unique identifiers for patients, providers & health facilities
'Push' vs. 'Pull' model of data sharing

It is essential that information can be accessed from anywhere in the health system to facilitate seamless communicationin between different stakeholders like patient-to-provider, provider-to-provider, provider-to-health managers/government agencies, government/provider-to-academia etc. Data should only be recorded once, at its source (single instance capture), the systems need to be sustainable, data must be standardised and understandable and the system needs to be available locally.

Objectives of IHIP& Outcome envisaged

The overall and ultimate purpose of setting up IHIP is to facilitate better health services to citizens, improve efficiency for healthcare services and health programmes by optimum utilisation of resources, availability of information/data – in secure manner and on real time basis- through integration of systems to ensure a comprehensive EHR Solution.

- **To aggregate &share data – by combining data source/health records at different places, improve quality by reducing duplication and manual transmission of data; ensure availability of health records / data across stakeholders/providers/hospitals, and**

- **To optimise resource – reduce duplication of data collection, reduce development and maintenance of overlapping systems.**

The specific objectives envisaged to be achieved through IHIP include:

- To leverage information & communication technologies (ICTs), aligned with health care goals under Digital India Programme & E-Kranti, meeting the requirements of different stake-holder groups- citizens, providers, policy makers & program managers

- To set-up a health information technology platform hosted on Cloud which has integrated and inter-operable standards compliant&open source healthcare management applications along with infrastructure/services for health information highway

- To enable real time collection & aggregation of data in an efficient & effective manner and to facilitate exchange of data across systems and stake-holders by establishing a framework for unique identification for patients, providers/health facilities and medical procedures.

- To facilitate improvement in quality/continuity and affordability of care through interoperable EHRs and better utilisation of resources

- To enable effective and efficient management of population health through real time aggregated data

The key outcomes/benefits envisaged from IHIP for different stake-holder groups include:

Stakeholder group	Outcome/ benefits
Citizen / Patient	• Continuity of care • Confidential & secure health data/records management • Better affordability-by avoiding redundant examination/ tests/procedures
Healthcare Providers	• Availability of real time and standardised data/information • Optimal information exchange to support better health outcome • Better decision support system

	• Fewer redundancies &medical errors
Payers	• Betterand smoother management of billing and claims processes • Enhancedprecisionand speed of coverage payments to healthcare service • Better analysis of cost-effectiveness of coverage policies • Business intelligence and more sophisticated data analysis towardsbetter coverage policies planning etc.
Government/ Health Managers	• Reduced duplication of data (single instance capture) - low data redundancy • Less fragmentation & more standardisation health information systems • Strengthening of evidence base for effective policies • Big data analytics – Dashboards for Monitoring & Evaluations facilitating effective decision making

With *decentralisation*and introduction of disruptive innovations /technologies, the full patient record is in various places - primary care, specialist, hospitals, pharmacy, home health care etc. - that must connect. IHIP would work in the direction to avoid a situation of data getting trapped in multiple silosandtoenable EHRs of citizens to be made available and accessible nationwide irrespective of whichever hospital/ healthcare provider he/she went to.

Components and Architecture

The various design aspects – in line with the prevailing challenges - considered while conceptualising IHIP include the following:

Integration of multiple systems – primarily patient centric- working in silos
Data capturing at source in digital format
Sharing and aggregation of quality data with minimum latency across applications and stake-holders
Availability of uniquely identifiable, easily traceable & verifiable data/records in the system
Access to quality data to health managers, policy makers etc. capturing various parameters linked with determinants of health for effective & efficient healthcare delivery

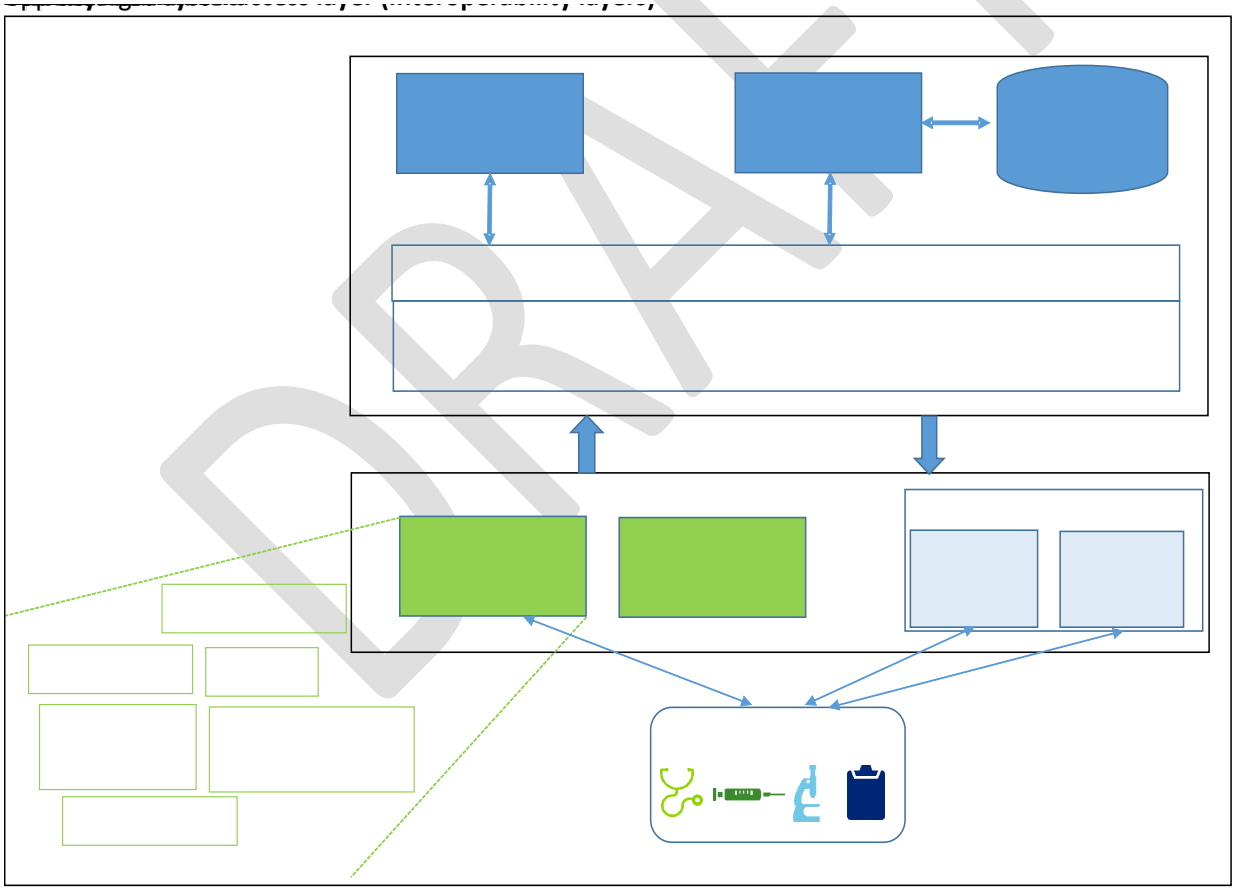
In line with the envisaged objectives, IHIP is proposed to encompassvarious componentsgrouped as **eHealth applications -** describing tools and systems that will be used by users to interactwith the system or for data processing; **eHealth data -** describing major data items and data that will be shared between components; and **eHealth infrastructure**: describing computing infrastructure required to support eHealth solutions.

Category	Brief
eHealth applications	
Application / Solution	• To meet various requirements related to creation of EHRthrough'suite for digital health records creation & management' consisting of[1]: ○ Hospital information management/ Clinical administration ○ Electronic medical records - medications, hospitalization records, and laboratory test results, andradiology images etc. ○ Remote patient monitoring – through internet-of-things; wearable devices, M2M technologies etc. ○ Telehealth ○ E-commerce- billing, payment, insurance claims etc. ○ Patient communications – SMS, emails, voice ○ Business intelligence & Analytics ○ Etc. • Also to include Public Health Applications/Systems having interface with patient/citizen health records –thoserelated to disease control/immunisation like Mother & Child Tracking System , TB Control Pogramme etc.
Information Exchange	• To facilitate exchange of information between different EMR systems • To connect to a database in which the medical records of thepatients are collected from multiple providers and consolidated together • Exchange between patients, healthcare providers, payers, medical data providers
eHealth infrastructure	
Hosting environment &Database management	• Hosting of servers -application, database- on 'Cloud' • User of IHIP doesn't need to own servers/ storage/database

[1] Given on illustrative basis; suite may include all or some

Standards	• Compliance of applications to EHR Standards, Open Source Software Policy, Open API Policy, other relevant eGovernance Standards
Privacy & Security	• Patient consent/ permissions • Disclosure management
eHealth data	
Registry / Identifiers	• Unique identifiers for patients, providers, health facilities
Repositories	• Health records

An architecture representing the fundamental organisation of IHIP'scomponents,their logical relation to each other/other systems and their inter-dependencies has been outlined and presented as below. These components need to interact amongst themselves according to a certain plan or design.



The points of care already having EHR applications running could join the platform for various common services and information exchange facilities/ interoperability features.

Business model

Business model for IHIP has been envisaged on the basis of a set of guiding principles - asset light platform, hiring infrastructure-as-a-service, offering application-as-a-service, cafeteria model of service offering on payment basis, and attaining financial sustainability in due course. These are detailed as follows. IHIP is proposed to use public – private partnership in an effective manner.

Business model element	Details
Infrastructure as a service	•IHIP would primarily adopt a model of 'Infrastructure as a Service (IaaS)' i.e. hiring/availing the required infrastructure on a service based model as per a well-defined service level agreement; no need for capex in infrastructure for networking, data centre etc. •At backend, Cloud Computing environment would be utilized. •However, individual hospitals/healthcare facilities will have to put in the required infrastructure – terminals, peripheral hardware etc. - in their premises in order to access and use IHIP.
Application as a service	•Based on evaluation - tried & tested solutions, open source solutions, complying with EHR Standards- application(s) of third parties, both public & private IT vendors, would be selected. •Various developers including innovative start-ups can host their standards compliant applications/solution-suites on IHIP after due process of evaluation by the Ministry. •Users can use the applications taking a 'Cafeteria Approach' i.e. to choose application from available options as per need
Fee for service	•The application providers having their applications hosted on IHIP can decide their fee structure to be charged from users- subscription fee / transaction fee etc. - based on service levels.
Regulatory	•The various regulatory aspects like privacy, security, access, disclosure, exchange etc. would be taken care of by the proposed National eHealth Authority. NeHA would also regulate other specifics like what information to be shared, within what timeline the information should be shared etc.
Funding assistance	•For common services and exchange facilities, it is

	proposed that in initial phase funding assistance could be provided by the Ministry to various related expenses. • Subsequently, IHIP could evolve a charging mechanism / structure for the common and exchange related services, which could be based on transaction fee/ subscription fee etc.

Implementation Framework

IHIP is proposed to be implemented and managed by Centre for Health Informatics (CHI) setup by MoHFW and currently managing the operations of National Health Portal (NHP). It has been already approved to register CHI as an 'Autonomous Society' under MoHFW. The CHI will have additional roles and responsibilities, apart from IHIP and NHP, under its purview such as secretarial work of the proposed National eHealth Authority (NeHA). The CHI will be strengthened with adequate manpower and resources along with a PMU.

The Centre for Health for Informatics (CHI) will utilize the existing approved resources i.e. manpower and infrastructure for operationalization of the work related to IHIP and create necessary administrative structures, if required. The structure & manpower proposed, in respect of PMU is provided as follows:

Set-up	Details[2]
PMU	• It will function within the Ministry of Health & Family Welfare & coordinate with the CHI. • PMU-Centre will be structured along the lines recommended in the HR Policy report, 2013 for e-Governance for Ministries undertaking large MMP. • PMU-Centre will consist of total of 10 personnel: ○ Programme manager : 2 ○ Functional consultants : 4 ○ Technical consultants : 4

Implementation timeframes

The development of the IHIP is envisaged over one year and initial adoption in a limited set of locations in the next twelve months concurrently. The platform will by then be demonstrably ready for adoption on a large scale. It will provide an optimal approach for progressive roll-out of the platform.

	Year 1				Year 2			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Set-up of PMU- Centre								

[2]The manpower strength shown is tentative in nature. It would be fine-tuned subsequently.

Registration of Centre for Health Informatics into a 'Society'								
Selection of agency for development of software & integration								
Development of software								
User testing								
Integration of software								
Agreement for hiring of cloud hosting services & connectivity services								
Set-up of Onsite support team at States								
Initial Roll out in select states/districts					3 states x 3 districts			
Ramp up in other states								

Cost elements

The various cost elements as identified for setting up of IHIP have been identified and are listed below. *The task of estimating these costs is underway and is expected to be completed shortly.*

Cost element	Type	Details
Test bed cost	Non-recurring	•For initial testing of IHIP
Integration of software / applications	Non-recurring	•For establishing inter-operability layers
Health information exchange set-up	Non-recurring + Recurring	•Including software and hardware
Human resource	Recurring	•Including cost of PMU
Hosting charges – Cloud	Recurring	•Cloud- 'Meghraj' - could be assumed to be available free of cost
Network Connectivity charges	Recurring	•Connectivity through various infrastructure set-up by Government – Bharat Net, NKN, NII etc. - could be assumed to be available free of cost.
Miscellaneous	Recurring	•Travels, training,

It has been assumed that the cost related to preparatory works at different public hospitals/health facilities would be taken care from the respective budgets of these hospitals/facilities.

Challenges and mitigation strategies

The variouspossible challenges anticipated in implementation / scale up of IHIP have been identified and accordingly mitigation strategies have been broadly outlined as follows:

Challenges	Mitigation strategy
Sustainability of IHIP	•Explore possible revenue sources from health information exchange platform like: ○ Real-time data services to different healthcare providers ○ Asynchronous data analytics and customized reports for health care analytics organizations- these entitieswill generate revenue by performing customized analyses that are of value to a wide variety of potential customers. These services can include riskassessment reports for health insurance companies, automatic alerts to patients about the negative interactionsof the drugs that are being prescribed, de-identified summaries of patient records for medical researchers andgeographical health trends or prediction of outbreaks of infectious disease for public health authorities etc.
Adoption & change management	•It is proposed to follow a comprehensive framework based on awareness/sensitisation- about benefits-and training for implementation so as to properly address the challenge of change management.
Attaining critical mass in time& scaling up	•Key challenge would be in terms of scalability of the platform & management of the scaled up centralized platform given the varied and diverse nature of the requirements of healthcare providers ranging from individual practitioners to large hospitals across public & private sector. •Participation of public healthcare sector into IHIP could be promoted by Ministry. This would enable IHIP attain critical mass and more. •Hospital/facilities empanelled under Central Government Health Scheme (CGHS) could be advised to use IHIP for better and cost effective service delivery. •Co-working with Indian Health Information Network, different Healthcare associations etc. for promoting use of IHIP
Incentive to share EHR	•For public health sector, Government provided funding assistance for setting up of HIS/ EHR applications under NHM. •Otherwise, incentives to share EHR would need to come from Payers segment (like Insurance Companies, ESIC, Employers etc.) as they benefit significantly in terms of faster claim processing, settlement etc.

Data privacy & security	•The various regulatory aspects like privacy, security, access, disclosure, exchange etc. would be taken care of by the proposed National eHealth Authority. •NeHA would also regulate other specifics like what information to be shared, within what timeline the information should be shared etc. •Till the time NeHA is set-up, the implementing agency would take care of such matters.
Standards adoption & compliance	•IHIP will follow the EHR Standards notified for India. The data to be uploaded on the platform by health care providers will be as per the minimum data set defined in the EHR standards. •It will adopt Metadata & Data Standards (MDDS) for semantic interoperability, when MDDS for Health Domain is notified. •It will adopt Demographics MDDS, notified by DeitY, as relevant •It will ensure framework for unique identification for patients, providers/health facilities and medical procedures

Way forward

The immediate to short term way-forward includes:

- Consultation with different key stakeholders – States/UTs, DeitY, India Health Information Network (IHIN), Industry Experts, Application/IT Vendors, Healthcare Providers etc. for fine-tuning & finalisation of the concept note
- Estimation of costs involved in setting up of IHIP once the concept in terms of services, infrastructure elements, business models, business scale & its ramp up etc. is finalised
- Generation of unique National Identification Number (NIN) for Health Facilities & providers (Public and Private) and its implementation in IT systems – **For details on NIN kindly refer Annexure -I**
- Information Dissemination and consultation with States/UTs regarding adoption of UHID as per the notified EHR Standards for India
- Fine-tuning & detailing of Concept Note along with costing
- Preparation of proposal for approval by SFC/EFC

References:

1. Health MMP DPR, March 2015, by NISG
2. A Sustainable Business Model for HealthInformation Exchange Platforms: TheSolution to Interoperability in Healthcare ITNiamYaraghi, January 2015
3. Hillestad, R., Bigelow, J., Bower, A., Girosi, F., Meili, R., Scoville, R., & Taylor, R. (2005). Can Electronic MedicalRecord Systems Transform Health Care? Potential Health Benefits, Savings, and Costs.

Annexure –I – National Identification Number (NIN)

Overview

In view of the key challenge highlighted in Health MMP DPR that health information & patient records with different health IT systems remain trapped in silos (having virtually no inter-operability) in absence of a common identifier in the different databases, detailed discussions were held with different divisions, states and NIC. After detailed discussions & consultation, it has been decided to generate and assign unique number i.e. National Identification Number (NIN) to each of the health facilities (both public & private) in order to facilitate interoperability and information exchange between different IT systems. It is also critical for creation of electronic health records of citizens.

National Identification Number (NIN):

National Identification Number (NIN) for Health facilities of India is a random 10 digit number generated for each facility and will be unique within India. NIN is generated on the basis of LUHN algorithm where the last digit is the checksum and the rest nine digits are the random number generated. In order to identify the geographic location of the health facility, attributes like state, district, taluka, village based on MDDS (Meta Data & Data Standards) codes will be attached to NIN. The Process of the generation of NIN number has been initiated by Centre for Health Informatics (CHI) in collaboration with NIC (NIC has provided basic software for NIN generation). The further development will be done by CHI as per needs and future requirements. The National Identification Number (NIN) would be in compliance with the MDDS[3] for Health domain as notified by DeitY.

Definition of the Health Facilities to be covered:

Health Facility means all Government, Private including allopathic, Ayurveda, Homeopathy, Sidha, Unani, Yoga Hospitals, clinics, diagnostic laboratories, blood banks etc.

Proposed ID Structure of NIN:

- It will be 10 Digit Unique Number given to each Health Facility.
- 9 digits will be a random number followed by 1 digit check-sum number

[3]NIN will follow Metadata & Data Standards (MDDS) for semantic interoperability, when MDDS for Health Domain is notified. It will adopt Demographics MDDS, notified by DeitY, as relevant.

- First digit will never be 0

Minimum Attributes to be captured in NIN

- State
- District
- Sub-District
- Village/Ward/Town/City
- Government/Semi-Government/Private
- Area: Rural/Urban
- Address

Action Plan for NIN generation, Validation & Adoption:

S. No.	Action Items
1.	Verification of data related to Health Facilities from different sources.
2.	Allocation of National Identity Number (NIN) to each Health Facility of India (HFI)
3.	All ICT Systems in Health Sector (Central, State, Private) will use NIN prospectively in new systemsin order to achieve interoperability and seamless information exchange
4.	States /UTs will need to take necessary steps to incorporate NIN in their existing systems
5.	Integration with Clinical Establishment Registration & Regulation System (CERRS).

Implementation timeframes

NIN Generation, Validation & Adoption by States

Phase 1 – December 2015 – March 2016

- NIN Generation at the centre to be complete by November, 2015
- States to validate the NIN numbers generated for at least 90% of the Government health facilities and generate NIN for at least 50% of Private facilities by March 2016
- States to ensure that NIN is implemented prospectively in all State Program systems like MCTS, NIKHSAY etc. prospectively from FY 2015-16 in order to facilitate data collection from all government health facilities

Phase 2- March 2016- December 2016

- States to ensure "NIN" is incorporated/ impregnated in all legacy systems/ database running in the state by tweaking the existing software's in order to facilitate interoperability and facilitate creation of electronic health records of citizens
- Complete linkage of data/records with unique identifier (UHID) as per EHR Standards/ MDDS Standards (revised /updated standards to be notified by MoHFW in due course of time)

Indicative Cost:

S. No.	Central Expenditure	Amount (in INR)
1.	Software Development for NIN including Web services	3,00,000
2.	O&M Support for NIN Application	4,50,000
3.	NIN Monitoring & Evaluation Team	72,00,000
	Total	**79,50,000**

S. No.	State Level Expenditure	Amount (in INR)
1.	Manpower Support to states for NIN related activities & data entry	5,66,00,000
2.	Miscellaneous Expenses – Travel & Training	56,60,000
	Total	**6,22,60,000**

Costing Assumptions:

Central Expenditure	No of Resources	Cost Per Resource/Month	No of Months Effort
Software Development for NIN including Web services	3	50,000.00	2
O&M Support for NIN Application	3	50,000.00	3
NIN Monitoring & Evaluation Team	6*	1,00,000.00	12

- NIN Motoring & Evaluation Team - 1 resource has been proposed for carrying out M&E work & coordination with 6 States/UTs

State Level Expenditure

- Manpower Support to states for NIN related activities & data entry have been calculated based on the following assumptions

- Number of unique applications taken ranging from 5-15 depending on progress status of eHealth in a state.
- Entries of NIN for health facilities to be made in the unique applications.
- Time required for entry of NIN for one facility in one application assumed as 5 minutes.
- Working hours as 8 in a working day , Working days as 22 in a months
- Maximum window of manpower support as 6 months
- Average cost per man-month as Rs.50000

- Miscellaneous Expenses - Travel & Training have been assumed as 10% of Manpower Support Cost

Receipt No : 313535/2016/E-GOV

e-office No:- 312968/2016

राष्ट्रीय स्वास्थ्य एवं परिवार कल्याण संस्थान
(स्वास्थ्य एवं परिवार कल्याण मंत्रालय, भारत सरकार के अधीन एक स्वायत्तशासी संस्थान)

आरोग्यम् सुखसम्पदा

National Institute of Health and Family Welfare
(An Autonomous Institute under Ministry of Health & Family Welfare, Government of India)

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No.: NIHFW/CHI/IHIP/2016

Dated: 6th July 2016

To
Mr Jitendra Arora
Director (eGov)
Ministry of Health and Family Welfare
Department of Health and Family Welfare
Nirman Bhawan, New Delhi

Sub: Approval for conducting one day workshop with HIS Vendors and Hospitals (HIS/EHR users) regarding Integrated Health Information Platform (IHIP) in India

Dear Sir,

This is in reference the Integrated Health Information Platform (IHIP) being setup by MoHFW. The CHI has been identified as a nodal agency for implementing this project in India. A detailed Concept Note and EOI document have been prepared by CHI. In the meantime the CHI would like to conduct an interactive session with HIS users (in private sectors/ hospitals) and HIS Solution providers for better understanding of the future challenges and current best practices.

Therefore, kind approval is required for conducting this workshop at NIHFW and expenditure from the NHP project fund in above activity.

Thanking you,
Sincerely yours,

Susarbadhikari

[Prof. S N Sarbadhikari]
Project Director, Centre for Health Informatics
NIHFW, Munirka, New Delhi 110067

AD (eGov)

JA for 12/7/16

Receipt No : 313535/2016/E-GOV

Q-11013/3/2016-eGov
Government of India
Ministry of Health & Family Welfare
(eGovernance Section)
*****

Nirman Bhavan, New Delhi
Dated 12th July, 2016

To

Prof. S. N. Sarbadhikari
Project Director, Centre for Health Informatics
National Institute of Health & Family Welfare
Baba Gang Nath Marg,
Munirka, New Delhi-110067

Subject: **Approval for conducting one day workshop with HIS vendors and Hospitals (HIS/EHR users) regarding Integrated Health information platform (IHIP) in India**

Sir,

Please refer to NIHFW's letter No. NIHFW/CHI/IHIP/2016 dated 6th July, 2016 on the subject above seeking approval for conducting one day workshop with HIS vendors and Hospitals (HIS/EHR users) regarding Integrated Health information platform (IHIP) in India.

2. It has been decided that the workshop may be conducted on 23rd July, 2016 at NDC Hall, NIHFW for better understanding of the future challenges and current best practices in respect of IHIP.

3. You're requested to kindly provide the necessary support for the Workshop. The expenditure incurred for this activity may be utilized from NHP funds.

4. This issues with the approval of JS (eGov).

Yours Faithfully,

(Jitendra Arora)
Director (eGov)
MoHFW
Tele No: 23062317

Copy to:-

1. Director, NIHFW, New Delhi
2. Shri Ankit Tripathi , Additional Director, CHI, NIHFW, New Delhi

Request for
Expression of Interest (REOI)
for
"Design, Development, Implementation, Integration, Deployment and Maintenance of Integrated Health Information Platform (IHIP)"

सत्यमेव जयते

Centre for Health Informatics

Ministry of Health and Family Welfare

Government of India

Table of Contents

ABBREVIATIONS AND ACRONYMS

API	Application Programming Interface
CGHS	Central Government Health Scheme
CHI	Centre For Health Informatics
CT	Computerized Tomography
DeitY	Department of Electronics and information Technology
DICOM	Digital Imaging and Communications in Medicine
ECG	Electrocardiogram
EHR	Electronic Health Record
REOI	Request for Expression of Interest
EPIC	Electoral Photo Identity Card
GIGW	Guidelines for Indian Government Websites
GoI	Government of India
GUI	Graphical User Interface
HIE	Healthcare Information Exchange
HIS	Hospital Information System
HL7 FHIR	Health Level-7 Fast Healthcare Interoperability Resources
IaaS	Infrastructure-as-a-Service
ICD - 10	International Classification of Diseases, Tenth Edition
ICT	Information and Communication Technology
IDSP	Integrated Disease Surveillance Programme

IHIP	Integrated Health Information Platform
IT	Information Technology
LOINC	Logical Observation Identifiers Names and Codes
MCIT	Ministry of Communication and IT
MCTS	Mother and Child Tracking System
MDDS	Metadata and Date Standard
MMP	Mission Mode Project
MoHFW	Ministry of Health and Family Welfare
MRI	Magnetic resonance imaging
NDA	Non-Disclosure Agreement
NeGP	National eGovernance Plan
NeHA	National eHealth Authority
NEMA	National Electrical Manufacturers Association
NHP	National Health Portal
NIHFW	National Institute of Health and Family Welfare
NIN	National Identification Number
PACS	Picture Archiving And Communication System
PAN	Permanent Account Number
ROC	Registrar Of Companies
SITC	System Integration Testing & Commissioning
SMS	Short Message Service
SNOMED-CT	Systematized Nomenclature of Medicine -- Clinical Terms
SOA	Service Oriented Architecture

Part I: General Terms

1. OBJECTIVE OF THIS REQUEST FOR EXPRESSION OF INTEREST (REOI)

Centre for Health Informatics (CHI), National Institute of Health and Family Welfare (NIHFW) under the Ministry of Health and Family Welfare (MoHFW) intends to invite Expression Of Interest (EOI) from competent and prospective Information Technology (IT) solution providers (hereinafter called "proponent(s)") to indicate their interests in design, development, implementation, integration, deployment and maintenance of The Integrated Health Information Platform (IHIP) greenfield project, a Government of India (GoI) initiative. Please refer Annexure -I for details.

2. REOI ISSUING AUTHORITY

This REOI is issued by the Project Director, CHI, intended to invite interested IT System Integrator (or a consortium of firms) to indicate their interest in providing the requested services. CHI's decision with regard to the short-listing of the proponent(s) through this REOI shall be final. CHI reserves the rights to reject any or all REOI's without assigning any reason.

Project Name	Design, Development, Implementation, Integration, Deployment and Maintenance of Integrated Health Information Platform (IHIP)
Project Initiator Details	
Department	CHI, MoHFW
Contact Person	Prof. Suptendra Nath Sarbadhikari
Contact Details	Project Director, CHI
Phone	011- 26165959
Email	supten@nihfw.org
Contact Person (Alternate)	Sh. Ankit Tripathi
	Additional Director, CHI
Phone	011- 2616 5959 Ext. 264
Email	at@nihfw.org
Contact Details	National Institute of Health and Family Welfare (NIHFW)
	Baba Gang Nath Marg, Munirka,
	New Delhi -110067

	011- 2610 7773
Website	www.nhp.gov.in

3. TENTATIVE CALENDAR OF EVENTS

The following table enlists important milestones and timelines for completion of the activities:

S. No.	Milestone	Date
1	Release of Request for Expression of Interest (REOI)	18/08/2016
2	Last date for submission of written queries as per Form V	29/08/2016
3	Proponents' Meeting	02/09/2016
4	Last date for Submission of REOI Response	08/09/2016
5	Opening of REOI Responses	08/09/2016
6	Declaration of Shortlisted Proponents	To be intimated later

4. AVAILABILITY OF THE REOI DOCUMENT

The REOI document can be downloaded from the Ministry of Health and Family Welfare (MoHFW) website www.mohfw.nic.in given under E-Citizen/Tender tab, National Health Portal (NHP) website www.nhp.gov.in and Central Public Procurement Portal website https://eprocure.gov.in. The proponent(s) are expected to examine all the instructions, forms, terms, project requirements and other details in the REOI document. Failure to furnish complete information as mentioned in the REOI documents or submission of the application not substantially responsive to the REOI documents in every respect will be at the proponent's risk and may result in rejection of the REOI.

5. PROPONENTS' MEETING

CHI will host a proponent's meeting in Delhi at the address given under *Contact Details* in *Section 2*. The meeting is tentatively scheduled as per the schedule given in *Section 3*. The representatives of the interested organizations (restricted to two persons) may attend the proponents' meeting at their own cost. The purpose of the meeting is to provide proponent with any clarifications regarding the REOI. It will also provide each proponent with an opportunity to seek clarifications regarding any aspect of the REOI and the IHIP project.

6. PROCESSING FEE

A non-refundable processing fee for Rs. 10,000 (Rupees Ten Thousand only) in the form of a demand draft drawn in favor of the Project Director, CHI, payable at New Delhi has to be submitted along with the response. REOI received without or with inadequate processing fees shall be liable to get rejected.

7. VENUE AND DEADLINE FOR SUBMISSION OF REOI's

EOI's, in its complete form in all respects as specified in the REOI, must be submitted to the Project Director, CHI, National Institute of Health and Family Welfare (NIHFW), Baba Gang Nath Marg, Munirka, New Delhi -110067. CHI may, in exceptional circumstances and at its discretion, extend the deadline for submission of REOI's by issuing an addendum to be made available on the NHP and MoHFW websites respectively (as mentioned above), in which case all rights and obligations of CHI and the proponents previously subject to the original deadline will thereafter be subjected to the deadline as extended.

Part II: Scope of Services

1. BACKGROUND

For effective adoption of ICT in Indian healthcare- aligned with health sector goals under Digital India Programme- need for integration of and interoperability amongst various Health IT systems and creation of electronic health records (EHRs) of citizens along with pan-India exchange has emerged critical. The High Power Steering Committee on eHealth - had decided to establish an 'Integrated Health Information Platform (IHIP)'.

Most of the patient records have a decentralized storage and gets trapped in multiple silos such as primary care, specialist, hospitals, pharmacy, home health care etc. IHIP would work in the direction to enable the electronic health records (EHRs) of citizens to be made available nationwide with the help of a centralized accessible platform. This would facilitate continuity of care, confidential and secure health data/records management, better affordability, optimal information exchange to support better health outcome, better decision support system, fewer redundancies and medical errors, low data redundancy, big data analytics etc. A framework of unique identification for patients, providers/health facilities and medical procedures would be incorporated so as interoperability (and thence longitudinal medical records) is attained amongst different Health IT systems.

IHIP is proposed to encompass various components like eHealth applications, eHealth data; and eHealth infrastructure. Business model for IHIP has been envisaged on the basis of a set of guiding principles - asset light platform, hiring infrastructure-as-a-service, offering application-as-a-service, cafeteria model of service offering on payment basis, and attaining financial sustainability in due course.

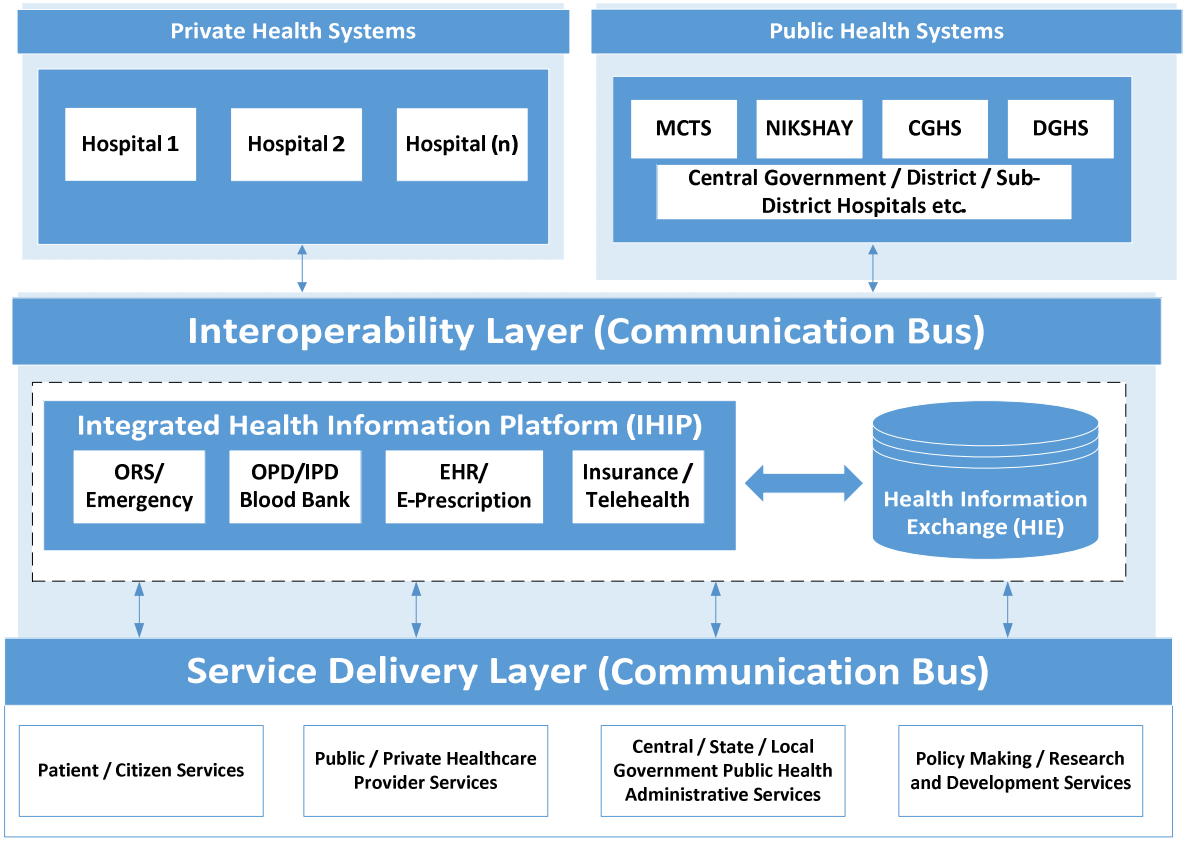
Individual hospitals/healthcare facilities will have to put in the required infrastructure – terminals, peripheral hardware etc. - in their premises in order to access and use IHIP. Tried and tested open source solutions complying with EHR Standards offered by third parties, both public and private IT vendors, would be hosted on IHIP. Various developers including innovative start-ups can host their standards compliant applications/solution-suites on IHIP after due process of evaluation by the Ministry. Users can use the applications taking a 'Cafeteria Approach' i.e. to choose application from available options as per their need.

The development of the IHIP is envisaged over one year and initial adoption in a limited set

of locations in the next twelve months concurrently. The platform will by then be demonstrably ready for adoption on a large scale. It will provide an optimal approach for progressive roll-out of the platform.

Sustainability of IHIP needs to be addressed properly. For ensuring sustainability, IHIP is planned to explore various possible revenue sources including from health information exchange platform like real-time data services to different healthcare providers, asynchronous data analytics /customized reports for health care analytics organizations etc. However, in short-to-medium term it would require funding assistance from the government, till it achieves a critical mass.

The various regulatory aspects like privacy, security, access, disclosure, exchange etc. would be taken care of by the proposed National eHealth Authority (NeHA). NeHA would also regulate other specifics like what information to be shared, within what timeline the information should be shared etc.



CONCEPT DIAGRAM OF IHIP

BROAD SCOPE OF REQUIREMENTS FOR THE PROPOSED SOLUTION

Proponent(s) should provide the solution in agreement with the following features:

2.1 Accessibility

a) A centralized web-based cloud compliant application with a simple and user friendly graphical user interface (GUI) for easy and fast mode of operation and usability. The application should be accessed by any District/Taluka/General Hospitals (both public and private), health professionals and citizens via laptop, desktop, mobile applications on wired or wireless connectivity.

Note: *A comprehensive solution document consisting of the technical architecture solution for handling the offline connectivity scenario, data handling capabilities/data sizing should be corresponded. Offline mode of operation need to be proposed by the selected proponent.*

b) The IHIP framework with the following HIS functional modules to be (the list is non-exhaustive):

1. Admit Discharge and Transfer (ADT) Module
2. Appointment and Queue Management Module
3. Out Patient Department (OPD) Module
4. In Patient Department (IPD) Module
5. Emergency Module
6. Referral Module
7. Laboratory Information System (LIS) Module
8. Radiology Information System (RIS) Module
9. Electronic Health Record Module
10. E-Prescription Module
11. Drug Supply Chain Management Module
12. Bed Availability Module
13. Blood Bank Module
14. Billing Module
15. Insurance Module

16. Telehealth Module
17. Alert/Notification Module
18. Feedback, Grievance and Appeal Module
19. Analytics and Reporting Dashboards Module
20. Economic Weaker Section (EWS) Module
21. External Application Module (wearable device and mobile application interface)
22. Other relevant module for interoperability of patient's health information

Note: *The selected proponent would be expected to include additional clinical/non-clinical modules (if required). The list of modules (as mentioned above) would be finalized in the RFP document.*

c) Generation of a universal healthcare identifier (UHID), primarily linked with the ADHAAR number and personal mobile number. Additionally, other GoI issued identification numbers should also be linked such as EPIC / Voter ID, Driving License, PAN, Passport, Ration Card etc. for unique identification of the citizen along with de-duplication of the assigned UHID to identify duplicate records for the same patient. The UHID number should also have an option of linkage with alternate ID's issued from various health facilities along with National Identification Number (NIN) provided for Health facilities (both public and private) of India. *Unique identification number for healthcare service providers to be considered as part of future requirement as notified by MoHFW.*

d) Online account access via citizen portal hosted on NHP as part of IHIP application, for every citizen through which the past medical history/health record could be viewed, edited and uploaded by the citizens themselves in order to create and maintain the EHR. Additionally, the portal should be capable of capturing patient/citizen's health data from various wearable devices and mobile application(s).

e) Generation of analytics dashboards and reports via intelligent analytics tools for predictive analytics by anonymizing health information data. The anonymized health data would be directed towards specified research purposes for monitoring and evaluations across the connected Health IT systems in order to facilitate effective policy-making decisions for public health at national level.

Note: *Users would not be allowed to perform Delete operations across the IHIP application. However, archival of the data would be permissible.*

2.2 Interoperability

a) Platform architecture should be open, flexible and dynamic in nature with easy application programming interface (API) communication with other health information sources including HIS of various hospitals, laboratories, physician clinics, Emergency Ambulance services, AYUSH, MCTS, NIKSHAY-TB, IDSP, CGHS, and other third party EHR application(s) permitted to be hosted on IHIP only after due process of evaluation and approval of CHI or MoHFW.

Note: *The selected proponent would be expected to understand and identify the interface requirements including an API toolkit for integration between the existing as well as proposed solution.*

b) Generation of standards compliant Electronic Health Record (EHR) for every citizen. The application should perform real-time collection and aggregation of patient specific clinical data trapped in multiple silos from various sources including EMR modules of HIS systems at hospitals, individual physicians and other health professionals in order to improve quality of care by reducing duplication and manual transmission of data across different stakeholders/providers/hospitals.

c) A centralized storage layer of Health Information Exchange (HIE) for storing the heavy image data records (like X rays, CT scan, MRI, ECG, and Angioplasty) and consequently generating a link/metadata of the image data records for the health institutions in order to access these records. The health institutions may have local storage of such data for a given period of time in addition to the centralized HIE storage of the heavy image data records. In cases of patients getting referred to another hospital, the data captured from the hospital referred would be available in HIE storage layer.

d) Generation of timely alerts and notifications via Emails, Voice and SMS to all stakeholders. SMS Gateway should support both “Push and Pull” services.

e) Enterprise class master data management software, which will help to create a unique/ true copy of data removing all de-duplication of patient specific clinical / non-clinical

health data from the database in order to enable ease of data warehousing and data management.

2.3 Scalability

The development of the IHIP is envisaged over one-year timeframe along with concurrent adoption in pilot locations in the time period of next 12 months. The system architecture should be capable for large scale adoption and an optimal approach for progressive nationwide roll-out.

Note: *The design of the application should allow easy addition of new functionality or features with minimal changes to the existing application.*

2.4 Security

Site-to-Site virtual private network (VPN) access to perform the services stated in this REOI, the selected proponent would agree to ensure that the solutions developed on top of these services would be able to preserve an adequate level of data privacy, cloud portability, and secure interoperability of data, when stored or retrieved or transmitted across the Health IT systems.

2.5 Audit Log

Maintaining and recording of audit trail which would be a detailed record showing all the user-defined events of the application and the transactions / operations performed by the concerned user during a given period of time. Audit log must display the following details, but not limited to, with filter /sorting criteria options: (the list is non-exhaustive)

- Patient ID and User Name
- Module – Sub Module – Screen – Section – Field Name
- Date and Timestamp
- Updated Value
- Activity Performed

Note: *The audit log should be updated as per the mandated rule/law by GoI at any time.*

2.6 Response Center

A 24x7 support center for feedbacks, grievances (for both patients and users), technical or operational support. The response center would serve as a single point of contact for all ICT related incidents, service requests, feedbacks as well as suggestions. A ticket number would be issued against the logged complaint, incident, and grievances with the appropriate severity level and timely escalations to the concerned stakeholders. The bidder should propose an integrated CRM system to handle case management and also provide help to users using innovative technologies like chat, co-browse functionalities.

2.7 Standardization

a) The IHIP application would be in compliance with the following EHR Standards for India for interoperability of data among health care providers. Few of them are mention below (the list is non-exhaustive):

i. Medical Image and Scanned Records Standards Compliance: NEMA DICOM PS3.0, PACS and Documentary data (scan for prescriptions, summaries etc.)

ii. HL 7 Compliance: To be used for exchange and seamless handling of inbound and outbound HL7 messages from any system that has similar capabilities; v2.x (V2) or v3.x (V3) or above. The proposed IHIP application would be adaptable for intermediate implementation of HL7 FHIR (whenever required).

iii. Laboratory observations Standards Compliance: LOINC coding standards

iv. WHO-FIC Standards Compliance: The WHO Family of International Classification (WHO-FIC) standards primarily used for aggregated information and statistical/epidemiological analysis reporting, for regulatory purposes as mandated by the health regulatory, intelligence, and various research bodies.

v. Clinical Healthcare Terminology Standards Compliance: SNOMED-CT coding is used to capture problem list, allergies, diagnosis, procedures etc. primarily used for clinical analytics and clinical decision support systems.

vi. WHO International Terminologies on Traditional Medicine Standards Compliance: For Ayurveda, Yoga, Unani, Siddha, Homeopathy systems of medicine (whenever notified).

Note: *Apart from above, the selected proponent needs to follow all the international and national industry standards.*

b) The proposed IHIP application would be based on the standards for Patient Identification such as MDDS for demographics, MDDS for health domain (whenever notified); Open Source solutions such as Open API, openEHR (whenever notified), Open Standards policy; Guidelines for Indian Government Websites (GIGW); and other relevant e-governance guidelines as per the norms suggested by DeitY, MCIT, Government of India.

Part III: Terms of Reference (ToR) and Pre-Qualification Criteria

Receipt No : 335555/2016/MOHFW

1. TERMS AND CONDITIONS UNDER WHICH THIS REOI IS ISSUED

a) This REOI is not an offer and is issued with no commitment. CHI reserves the right to withdraw the REOI and change or vary any part thereof at any stage. CHI also reserves the right to disqualify any proponent, should it be so necessary at any stage.

b) CHI reserves the right to withdraw this REOI if CHI determines that such action is in the best interest of the GoI.

c) Timing and sequence of events resulting from this REOI shall ultimately be determined by CHI.

d) No oral conversations or agreements with any official, agent, or employee of CHI shall affect or modify any terms of this REOI and any alleged oral agreement or arrangement made by a proponent with any department, agency, official or employee of CHI shall be superseded by the definitive agreement that results from this REOI process. Oral communications by CHI to proponents shall not be considered binding on CHI, nor shall any written materials provided by any person other than CHI.

e) Neither the proponent nor any of the proponent's representatives shall have any claims whatsoever against CHI or any of their respective officials, agents, or employees arising out of, or relating to this REOI or these procedures.

f) Proponents who are found to canvass, influence or attempt to influence in any manner the qualification or selection process, including without limitation, by offering bribes or other illegal gratification, shall be disqualified from the process at any stage.

g) Each applicant shall submit only one Pre-qualification requirement.

2. RIGHTS TO THE CONTENT OF THE REOI

For all the REOI's received before the last date and time of submission, the REOI's and accompanying documentation of the Pre-Qualification will become the property of CHI and will not be returned after opening of the document. CHI is not restricted in its rights to use or disclose any or all of the information contained in the REOI and can do so without compensation to the proponents. CHI shall not be bound by any language in the REOI indicating the confidentiality of the REOI or any other restriction on its use or disclosure.

3. ACKNOWLEDGEMENT OF UNDERSTANDING OF TERMS

By submitting an REOI, each proponent shall be deemed to acknowledge that it has carefully read all sections of this REOI, including all forms, schedules and forms hereto, and has fully informed itself as to all existing conditions and limitations.

4. EVALUATION OF PRE QUALIFICATION OF REOI

The proponents' Pre-Qualification in the REOI document will be evaluated as per the requirements specified in the REOI and adopting the pre-qualification criteria spelt out in this REOI. The proponents are required to submit all required documentation in support of the pre-qualification criteria specified (e.g. detailed project citations and completion certificates, client contact information for verification, profiles of project resources and all others) as required for evaluation.

5. LANGUAGE OF REOI

The REOI and all correspondence and documents shall be written in English.

6. PRE-QUALIFICATION CRITERIA

The proponent should be competent enough to be able to develop, manage and operate IHIP at State Level, Regional Level and Central Level HUBs of health facilities/centers by deploying appropriate technical manpower as per expected services.

Proponent should have the experience in implementing integrated health information application software conforming to National level interoperability and open standards. In case the proponent offers off the shelf product, the proponent has to customize the software as per the need of CHI to ensure interoperability at National level.

Proponent may compete as a single entity or in a consortium. However, consortium should not include more than 3 members.

The selected proponent will be responsible to set up the integrated health information application infrastructure as per broader architecture and scope indicated in the REOI.

For selection, the proponent shall meet all the criteria (no. 1 to 7) as outlined in the table below.

S. No	Criteria Required	Document
1	The Company / Lead Proponent should be an entity registered in India under the Company Act, 1956 (or) a firm registered under the Limited Liability Partnership Act, 2008 (or) a firm registered under the Partnership Act, 1932 for last 5 years as on 31st March, 2016, and must have a registered office in India which should be in operation as on 31st March, 2016 In case of a consortium, the Lead Proponent would need to submit an agreement with the other	Certificates of Incorporation Consortium Agreement

S. No	Criteria Required	Document
	members of consortium for the contract clearly indicating the division of work and their relationship.	
2	The Company / Lead Proponent of consortium must have a proven capability in setting up, implementation, operations and maintenance of "Live" HIE systems and healthcare solutions (i.e. HIS, EMR, EHR) across large hospitals or networks of hospitals/health facilities and should have handled total volume of 100,000 health records (creation and/or exchange) during the last 3 years (as on 31st March, 2016).	Satisfactory Completion of Works Certificates from the client(s) confirming the year of work, scope of work and work order details; **OR** Work Order + Phase Completion Certificate from the client(s) for the ongoing "Live" projects with their scope of work
3	The Company / Lead Proponent of consortium should have Positive Net Worth as on 31st March 2016	Audited and Certified Balance Sheet of last 3 Financial Years (2013-14; 2014 – 15; 2015 – 16) **AND** Certificate from Chartered Accountant and Authorized Signatory
4	Cumulative turnover of the Company/ Lead Proponent during the last three financial years 2013-14, 2014-15, 2015-16 from below mentioned Health-IT businesses (excluding turnover from hardware) should be at least Rs. 200 Crores. (as per the published Income Statement): □ Health Information Exchange System □ Hospital Management Information System □ IT enabled systems covering data integration, data warehousing and data management. In case of calendar year, 3 years up to December	Certificate from statutory auditor appointed by the company (of last 3 Financial Years (2013-14; 2014 – 15; 2015 – 16)

S. No	Criteria Required	Document
	2015 would be taken in to account	
5	The Company / Partners of consortium should have a valid Service Tax Registration and Income Tax returns and PAN card	□ Copy of Service Tax Registration □ Income Tax returns for last 3 financial years (till 2015-16) □ Audit report from CA for last 3 financial years (till 2015-16) □ Copy of PAN card
6	The Company / Partners of consortium should not be under a declaration of ineligibility for corrupt and fraudulent practices issued by any of the Central or State Government Ministries / Departments, and should not have violated / infringed upon any Indian or foreign trademark, patent, registered design or other intellectual property rights	Undertaking (Self Certification) on company letter head certified by authorized signatory.
7	The Company/ Lead Proponent should be a CMMI Level 5 certified.	Copy of the certificate from authorized certifying agency. The certificate should be valid as on 31st March 2016.

7. RESPONSE REQUIREMENTS

1. The Response to the Pre-Qualification Requirements shall be prepared in accordance with the requirements specified in this REOI and in the format prescribed in this document for each of the above mentioned qualifying criteria as proof of having the minimum requirements. EOI's must be direct, concise, and complete. All information not directly relevant to this REOI should be omitted.

2. The Pre-Qualification EOI shall be sealed and super scribed "Response to Pre-Qualification Requirements – Design, Development, Implementation, Integration, Deployment and Maintenance of Integrated Health Information Platform (IHIP)" on the top right hand corner and addressed to CHI at the address specified in this document.

3. The pre-qualification EOI should be submitted with two printed copies of the entire EOI, one marked ORIGINAL and the second one as DUPLICATE and a soft copy on non-rewriteable compact discs (CDs) with all the contents of the pre-qualification REOI. The words "Response to Pre-Qualification Requirements – Design, Development, Implementation, Integration, Deployment and Maintenance of Integrated Health Information Platform (IHIP)" shall be written in indelible ink on the CD. The Hard Copy shall be signed by the authorized signatory on all the pages before being put along with the CD in the envelope and sealed.

4. In case of discrepancies between the information in the printed version and the contents of the CDs, the printed version of the pre-qualification EOI will prevail and will be considered as the EOI for the purpose of evaluation.

5. The EOI should contain the copies of references and other documents as specified in the REOI. A technical write-up or proof of concept should be included in the envelop.

6. A board resolution authorizing the signatory of EOI to sign as a binding document and also to execute all relevant agreements forming part of EOI should be included in the envelop.

7. CHI will not accept delivery of EOI in any manner other than that specified in this REOI. EOI delivered in any other manner shall be treated as defective, invalid and rejected.

8. PRE-QUALIFICATION REQUIREMENTS

The Pre-Qualification EOI should be submitted in the sealed envelope with the following details. Proponents are requested to submit their responses for the Pre- Qualification Requirements in 3 parts, clearly labelled according to the following categories:

1. Part I – Covering Letter, Processing Fee, and Board Resolution/Power of Attorney

a) Covering Letter from the Proponent as per the format provided in Form I.

b) A non-refundable processing fee of Rs. 10,000 (Rupees Ten Thousand only) in the form of a demand draft should be included in the envelop.

b) A board resolution authorizing the signatory of EOI to sign as a binding document and also to execute all relevant agreements forming part of EOI should be included in the envelop.

2. Part II – Details of the Organization

a) This part must include a general background of the respondent organization along with other details of the organization as per the format provided in the REOI (Form II). Enclose the mandatory supporting documents listed in format.

b) The proponent must also provide the financial details of the organization as per format provided in the REOI (Form III). Enclose the mandatory supporting documents listed in format.

3. Part III – Relevant Project Experience for IT Enabled Healthcare Projects

Respondents must provide details (client organization, nature / scope of the project, project value) of IT enabled healthcare project experience related to HIE systems, HIS systems, systems as per the format provided in the REOI (Form IV). The projects mentioned here should match with the projects quoted by the respondent in order to satisfy the qualification requirements. Enclose the mandatory supporting documents listed in format.

Part IV: Response Formats

FORM I: COVERING LETTER

[On Company Letterhead]
[Location, Date]

To:

The Project Director
Centre for Health Informatics
National Institute of Health and Family Welfare
Baba Gang Nath Marg,
Munirka
New Delhi 110067

Subject: Expression of Interest for the Integrated Health Information Platform (IHIP).

Dear Sir,

We, the undersigned, offer to provide the Design, Development, Implementation, Integration, Deployment and Maintenance of "Integrated Health Information Platform (IHIP)" in accordance with your Request for Expression of Interest dated [__/__/2016] and our response.

4. Primary and Secondary contacts for our company are:

	Primary Contact	Secondary Contact
Name:		
Title:		
Company Name:		
Address		
Phone:		
Mobile:		
Fax:		

5. We are hereby submitting our Expression of Interest (EOI) in both printed format and as a soft copy in a CD. We understand you are not bound to accept any EOI you receive.

6. We confirm that the information contained in this response or any part thereof, including its exhibits, and other documents and instruments delivered or to be delivered to CHI is true, accurate, verifiable and complete. This response includes all information necessary to ensure that the statements therein do not in whole or in part mislead the department in its short-listing process.

7. We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the short-listing process or unduly favour our company in the short-listing process, we are liable to be dismissed from the selection process or termination of the contract during the project, if selected to do so, for undertaking the work to design, develop, implement, and system integration testing and commissioning (SITC), operations and maintenance for the nation level rollout of the IHIP Project.

8. We agree to abide by the conditions set forth in this REOI.

9. It is hereby confirmed that

I/We are entitled to act on behalf of our corporation/company/ firm/organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Dated this, Day of, 2016

(Signature) (In the capacity of)

Duly authorized to sign the REOI Response for and on behalf of: Sincerely,

[Name]

[Title Signature Date]

(Name and Address of Company) Seal/Stamp of the Company(s) / Lead Proponent

CERTIFICATE AS TO AUTHORISED SIGNATORIES

I, ……, certify that I am …… of……,and that…… who has signed the above response is authorized to bind the corporation by authority of its governing body.

[Date]

(Name and Address of Company) Seal/Stamp of the Company(s) / Lead Proponent

FORM II: GENERAL DETAILS OF THE ORGANISATION

Details of the Organization	
Name of organization	
Nature of the legal status in India	
Legal status reference details	
Nature of business in India	
Date of Incorporation	
Date of Commencement of Business	
Address of the Headquarters	
Address of the Registered Office in India	
Other Relevant Information	

Mandatory Supporting Documents:

a) Certificate of Incorporation from Registrar Of Companies (ROC)

b) A certificate from the Chartered Account must be attached as a proof of cumulative turnover of atleast Rs.200 Crores for last 3 financial years (till 2015-16).

c) A certificate from the Chartered Account must be attached as a proof of positive Net Worth as on 31st March 2016

d) Undertaking (Self Certification) that the Company(s) / Partners of consortium has never been engaged themselves in any corrupt and fraudulent practices and has never been blacklisted by any Central /State Government Departments.

e) Company(s) / Partners of consortium should not have violated / infringed upon any Indian or foreign trademark, patent, registered design or other intellectual property rights. A self-certificate should be provided by the proponent.

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FORM III: FINANCIAL DETAILS OF THE ORGANIZATION

Financial Information			
	FY 2013-14	**FY 2014-15**	**FY 2015-16**
Revenue (in INR crores)			
Profit Before Tax (in INR crores)			
Other Relevant Information			
Mandatory Supporting Documents: Audited and Certified Balance Sheet of last 3 Financial Years (2013-14; 2014 – 15; 2015 – 16) must be attached. The Net worth of the company should be positive as on 31/03/2016.			

FORM IV: PROJECT EXPERIENCE

Project Experience	
General Information	
Name of the project	
Client for which the project was executed	
Name and contact details of the client	
Current Status	
Project Details	
Description of the project	
Geographical Scope	
Outcomes of the Project	
Applications	
Technologies Used	
Infrastructure	
Operations and Services	
Number of Locations / Sites	
Other Details	
Duration of Implementation (post selection)	
Total Duration of the project (no. of months, start date, completion date)	
Total cost of the project	
Total cost of the services provided by the Proponent	
Other Relevant Information	
Mandatory Supporting Documents: a. Work Orders / Client Certificate (including the cost details of the project) confirming year and area of activity should be attached. Supporting documents for cost of project undertaken to be provided. b. The Company(s) / Lead Proponent shall produce the "satisfactory completion of works certificate" in reference to the clients they have worked for. c. Complete details of the scope of the project should be provided to indicate the relevance to the prequalification criterion (which is part of minimum qualification criteria).	

FORM V: QUERY FORM

S. No.	Category/Section of REOI	Clarifications Requested	Remarks

Annexure – I

Integrated Health Information Platform (IHIP)

Introduction

This Concept Note outlines objectives, components along with high level architecture, business model, implementation framework, cost elements and estimate etc. for the proposed Integrated Health Information Platform (IHIP). It has been prepared based on DPR of Health MMP, discussions held in meeting of Steering Committee on eHealth, deliberations held with MoHFW's officials/ DeitY/Experts/ Solution Vendors etc., and review of select relevant documents available through desk research.

Background

During the last two years, a detailed exercise had been undertaken for scoping and preparation of project report for comprehensive adoption of ICT in Indian healthcare under Health Mission Mode Project (MMP)-aligned with Digital India Programme and E-Kranti (NeGP 2.0). It emphasized primarily upon the need for integration of and interoperability amongst various Health IT systems and creation of electronic health records (EHRs) of citizens along with pan-India exchange.

Creation of EHRs of citizens and establishment of supporting infrastructure/ mechanism for exchange of health records emerges as one of the key focus areas under the plan for comprehensive use of ICT in healthcare. Accordingly, in the meeting of Steering Committee on eHealth held on 27th July, 2015, it was deliberated and decided to establish an 'Integrated Health Information Platform' primarily focusing on interoperable EHRs and subsequently to encompass other key components of eHealth, as feasible, like Drug Supply Chain Management, Citizen Portal etc., as underlined in Health MMP DPR.

Issues to be addressed

It has been observed those healthcare organizations are mostly operating in data-rich but information-poor environment. Patient health data is being gathered / stored - distributed over a number of locations and via a number of IT solutions - which is generally inaccessible, improperly formatted/not standardized and hence not interoperable. System interoperability along with supportive IT frameworks and optimal information exchange to support better healthcare services and thus outcomes is the key requirement in the prevailing scenario. Also need is there for transforming data into information and evidence, which could help in decision support systems (DSSs).

Multiple data sources need to be integrated in meaningful ways to improve services in relation to access, quality, user satisfaction and efficiency. With information sharing, volumes of independent sets of data across multiple systems can be brought together in integrated, relevant and useful summary views. Integrated data can be de-identified and aggregated in such a way to enable policy-making decisions at public health level. The current focus is more on "pushing" vs "pulling" data, which often leads to ineffective data sharing and impedes care quality and efficiency impacting outcomes.

Key issues need to be addressed
Fragmented information streams/systems
Quality of data
Large volume of data collected
Duplication of data collection – *Data Redundancy*
Sub-optimal resource utilisation due to duplicate information systems
Lack of interoperability and accessibility of information
Lack of unique identifiers for patients, providers and health facilities
'Push' vs. 'Pull' model of data sharing
No common EHR system

It is essential that information can be accessed from anywhere in the health system to facilitate seamless communication in between different stakeholders like patient-to-provider, provider-to-provider, provider-to-health managers/government agencies, government/provider-to-academia etc. Data should only be recorded once, at its source

(single instance capture), the systems need to be sustainable, data must be standardized and understandable and the system needs to be available locally

Objectives of IHIP and Outcome envisaged

The overall and ultimate purpose of setting up IHIP is to facilitate better health services to citizens, improve efficiency for healthcare services and health programmes by optimum utilization of resources, availability of information/data – in secure manner and on real time

The specific objectives envisaged to be achieved through IHIP include:

- To leverage information and communication technologies (ICTs), aligned with health care goals under Digital India Programme and E-Kranti, meeting the requirements of different stake-holder groups- citizens, providers, policy makers and program managers

- To set-up a health information technology platform hosted on Cloud which has integrated and inter-operable standards compliant and open source healthcare management applications along with infrastructure/services for health information highway

- To enable real time collection and aggregation of data in an efficient and effective manner and to facilitate exchange of data across systems and stake-holders by establishing a framework for unique identification for patients, providers/health facilities and medical procedures.

- To facilitate improvement in quality/continuity and affordability of care through interoperable EHRs and better utilization of resources

- To enable effective and efficient management of population health through real time aggregated data

The key outcomes/benefits envisaged from IHIP for different stake-holder groups include:

Stakeholder group	Outcome/ benefits
Citizen / Patient	• Continuity of care • Confidential and secure health data/records management • Better affordability-by avoiding redundant examination/ tests/procedures
Healthcare Providers	• Availability of real time and standardised data/information • Optimal information exchange to support better health outcome • Better decision support system • Fewer redundancies and medical errors
Payers	• Better and smoother management of billing and claims processes • Enhanced precision and speed of coverage payments to healthcare service • Better analysis of cost-effectiveness of coverage policies • Business intelligence and more sophisticated data analysis towards better coverage policies planning etc.
Government/ Health Managers	• Reduced duplication of data (single instance capture) - low data redundancy • Less fragmentation and more standardisation health information systems • Strengthening of evidence base for effective policies • Big data analytics – Dashboards for Monitoring and Evaluations facilitating effective decision making

Components and Architecture

The various design aspects – in line with the prevailing challenges - considered while conceptualizing IHIP include the following:

Integration of multiple systems – primarily patient centric- working in silos
Data capturing at source in digital format
Sharing and aggregation of quality data with minimum latency across applications and stake-holders
Availability of uniquely identifiable, easily traceable and verifiable data/records in the system
Access to quality data to health managers, policy makers etc. capturing various parameters linked with determinants of health for effective and efficient healthcare delivery

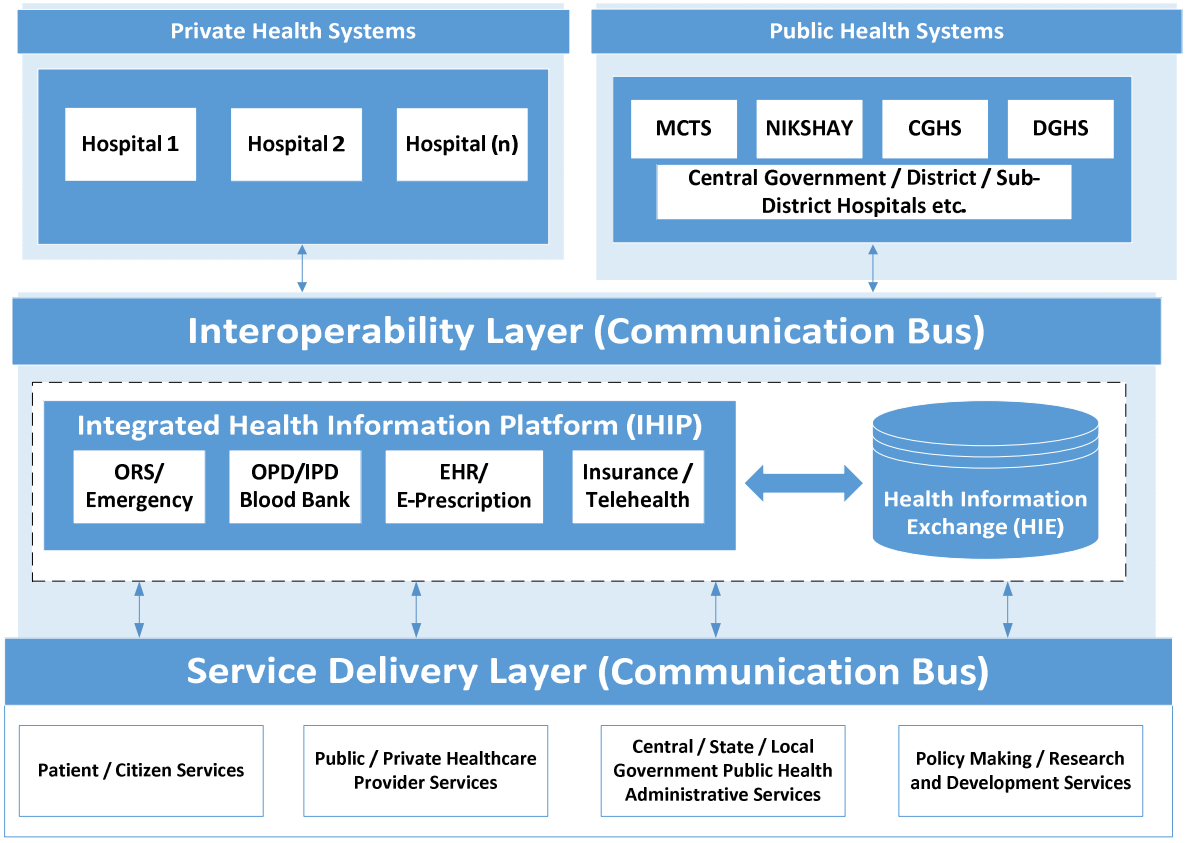
In line with the envisaged objectives, IHIP is proposed to encompass various components grouped as **eHealth applications -** describing tools and systems that will be used by users to interact with the system or for data processing; **eHealth data -** describing major data items and data that will be shared between components; and **eHealth infrastructure**: describing computing infrastructure required to support eHealth solutions.

Category	Brief
eHealth applications	
Application / Solution	• To meet various requirements related to creation of EHRthrough'suite for digital health records creation and management' consisting of[1]: o Hospital information management/ Clinical administration/Electronic medical records o Remote patient monitoring – through internet-of-things; wearable devices, M2M technologies etc. o Telehealth

[1] Given on illustrative basis; suite may include all or some

Category	Brief
	○ E-commerce- billing, payment, insurance claims etc. ○ Patient communications – SMS, emails, voice ○ Business intelligence and Analytics ○ Etc. • Also to include Public Health Applications/Systems having interface with patient/citizen health records –those related to disease control/immunisation like Mother and Child Tracking System , TB Control Pogramme etc.
Information Exchange	• To facilitate exchange of information between different EMR systems • To connect to a database in which the medical records of the patients are collected from multiple providers and consolidated together • Exchange between patients, healthcare providers, payers, medical data providers
eHealth infrastructure	
Hosting environment and Database management	• Hosting of servers -application, database- on 'Cloud' • User of IHIP doesn't need to own servers/ storage/database
Standards	• Compliance of applications to EHR Standards, Open Source Software Policy, Open API Policy, other relevant eGovernance Standards
Privacy and Security	• Patient consent/ permissions • Disclosure management
eHealth data	
Registry / Identifiers	• Unique identifiers for patients, providers, health facilities
Repositories	• Health records

An architecture representing the fundamental organization of IHIP's components, their logical relation to each other/other systems and their inter-dependencies has been outlined and presented as below. These components need to interact amongst themselves according to a certain plan or design.



CONCEPT DIAGRAM OF IHIP

Annexure – II

National Identification Number (NIN)

Overview

In view of the key challenge highlighted in Health MMP DPR that health information and patient records with different Health IT systems remain trapped in silos (having virtually no inter-operability) in absence of a common identifier in the different databases, detailed discussions were held with different divisions, states and NIC. After detailed discussions and consultation, it has been decided to generate and assign unique number i.e. National Identification Number (NIN) to each of the health facilities (both public and private) in order to facilitate interoperability and information exchange between different IT systems. It is also critical for creation of electronic health records of citizens.

National Identification Number (NIN):

National Identification Number (NIN) for Health facilities of India is a random 10-digit number generated for each facility and will be unique within India. NIN is generated on the basis of LUHN algorithm where the last digit is the checksum and the rest nine digits are the random number generated. In order to identify the geographic location of the health facility attributes like state, district, taluka, village based on MDDS (Meta Data and Data Standards) codes will be attached to NIN. The Process of the generation of NIN number has been initiated by Centre for Health Informatics (CHI) in collaboration with NIC (NIC has provided basic software for NIN generation). The further development will be done by CHI as per needs and future requirements. The National Identification Number (NIN) would be in compliance with the MDDS[2] for Health domain as notified by DeitY.

Definition of the Health Facilities to be covered:

Health Facility means all Government, Private including allopathic, Ayurveda, Homeopathy, Sidha, Unani, Yoga Hospitals, clinics, diagnostic laboratories, blood banks etc.

[2]NIN will follow Metadata and Data Standards (MDDS) for semantic interoperability, when MDDS for Health Domain is notified. It will adopt Demographics MDDS, notified by DeitY, as relevant.

ID Structure of NIN:

- It is 10 Digit Unique Number given to each Health Facility.
- 9 digits will be a random number followed by 1 digit check-sum number
- First digit will never be 0

Action Plan for NIN generation, Validation and Adoption:

S. No.	Action Items
1.	Verification of data related to Health Facilities from different sources.
2.	Allocation of National Identity Number (NIN) to each Health Facility of India (HFI)
3.	All ICT Systems in Health Sector (Central, State, Private) will use NIN prospectively in new systems in order to achieve interoperability and seamless information exchange
4.	States /UTs will need to take necessary steps to incorporate NIN in their existing systems
5.	Integration with Clinical Establishment Registration and Regulation System (CERRS).

As per GFR, Evaluation Committee is required only during evaluation of Bids after RFP.

GFR :

II. PROCUREMENT OF SERVICES

Rule 163. The Ministries or Departments may hire external professionals, consultancy firms or consultants (referred to as consultant hereinafter) for a specific job, which is well defined in terms of content and time frame for its completion or outsource certain services.

Rule 164. This chapter contains the fundamental principles applicable to all Ministries or Departments regarding engagement of consultant(s) and outsourcing of services. Detailed instructions to this effect may be issued by the concerned Ministries or Departments. However, the Ministries or Departments shall ensure that they do not contravene the basic rules contained in this chapter.

Rule 165. Identification of Work/Services required to be performed by Consultants: Engagement of consultants may be resorted to in situations requiring high quality services for which the concerned Ministry/ Department does not have requisite expertise. Approval of the competent authority should be obtained before engaging consultant(s).

Rule 166. Preparation of scope of the required work/service: The Ministries/Departments should prepare in simple and concise language the requirement, objectives and the scope of the assignment. The eligibility and prequalification criteria to be met by the consultants should also be clearly identified at this stage.

Rule 167. Estimating reasonable expenditure: Ministry or Department proposing to engage consultant(s) should estimate reasonable expenditure for the same by ascertaining the prevalent market conditions and consulting other organisations engaged in similar activities.

Rule 168. Identification of likely sources : (i) Where the estimated cost of the work or service is upto Rupees twenty-five lakhs, preparation of a long list of potential consultants may be done on the basis of formal or informal enquiries from other Ministries or Departments or Organisations involved in similar activities, Chambers of Commerce & Industry, Association of consultancy firms etc. (ii) Where the estimated cost of the work or service is above Rupees twenty-five lakhs, in addition to (i) above, an enquiry for seeking 'Expression of Interest' from consultants should be published in **at least one national daily and the Ministry's web site**. The web site address should also be given in the advertisements. Enquiry for seeking Expression of Interest should include in brief, the broad scope of work or service, inputs to be provided by the Ministry or Department, eligibility and the pre-qualification criteria to be met by the consultant(s) and consultant's past experience in similar work or service. The consultants may also be asked to send their comments on the objectives and scope of the work or service projected in the enquiry. Adequate time should be allowed for getting responses from interested consultants

Rule 169. Short listing of consultants: On the basis of responses received from the interested parties as per Rule 168 above, consultants meeting the requirements should be short listed for further consideration. The number of short listed consultants should not be less than three.

Rule 170. Preparation of Terms of Reference (TOR): The TOR should include (i) Precise statement of objectives; (ii) Outline of the tasks to be carried out; (iii) Schedule for completion of tasks; (iv) The support or inputs to be provided by the Ministry or Department to facilitate the consultancy. (v) The final outputs that will be required of the Consultant;

Rule 171. Preparation and Issue of Request for Proposal (RFP): RFP is the document to be used by the Ministry/Department for obtaining offers from the consultants for the required

work/service. The RFP should be issued to the shortlisted consultants to seek their technical and financial proposals. The RFP should contain: (i) A letter of Invitation (ii) Information to Consultants regarding the procedure for submission of proposal. (iii) Terms of Reference (TOR). (iv) Eligibility and pre-qualification criteria in case the same has not been ascertained through Enquiry for Expression of Interest. (v) List of key position whose CV and experience would be evaluated. (vi) Bid evaluation criteria and selection procedure. (vii) Standard formats for technical and financial proposal. (viii) Proposed contract terms. (ix) Procedure proposed to be followed for midterm review of the progress of the work and review of the final draft report.

Rule 172. Receipt and opening of proposals: Proposals should ordinarily be asked for from consultants in 'Two bid' system with technical and financial bids sealed separately. The bidder should put these two sealed envelopes in a bigger envelop duly sealed and submit the same to the Ministry or Department by the specified date and time at the specified place. On receipt, the technical proposals should be opened first by the Ministry or Department at the specified date, time and place.

Rule 173. Late Bids: Late bids i.e. bids received after the specified date and time of receipt, should not be considered.

Rule 174. Evaluation of Technical Bids: Technical bids should be analysed and evaluated by a Consultancy Evaluation Committee (CEC) constituted by the Ministry or Department. The CEC shall record in detail the reasons for acceptance or rejection of the technical proposals analysed and evaluated by it.

Rule 175. Evaluation of Financial Bids of the technically qualified bidders: The Ministry or Department shall open the financial bids of only those bidders who have been declared technically qualified by the Consultancy Evaluation Committee as per Rule 174 above for further analysis or evaluation and ranking and selecting the successful bidder for placement of the consultancy contract.

Rule 176. Consultancy by nomination: Under some special circumstances, it may become necessary to select a particular consultant where adequate justification is available for such single-source selection in the context of the overall interest of the Ministry or Department. Full justification for single source selection should be recorded in the file and approval of the competent authority obtained before resorting to such single-source selection.

Rule 177. Monitoring the Contract: The Ministry/Department should be involved throughout in the conduct of consultancy, preferably by taking a task force approach and continuously monitoring the performance of the consultant(s) so that the output of the consultancy is in line with the Ministry /Department's objectives.

Request for
Expression of Interest (REOI)
for
"Design, Development, Integration, Deployment, Implementation and Maintenance of Integrated Health Information Platform (IHIP)"

सत्यमेव जयते

Centre for Health Informatics

Ministry of Health and Family Welfare

Government of India

Table of Contents

5. FORM V: QUERY

ABBREVIATIONS AND ACRONYMS

API	Application Programming Interface
CGHS	Central Government Health Scheme
CHI	Centre for Health Informatics
CT	Computerized Tomography
DeitY	Department of Electronics and Information Technology
DICOM	Digital Imaging and Communications in Medicine
ECG	Electrocardiogram
EHR	Electronic Health Record
eHeath	Electronic Health i.e. use of ICT in healthcare
REOI	Request for Expression of Interest
EPIC	Electoral Photo Identity Card
GIGW	Guidelines for Indian Government Websites
GoI	Government of India
GUI	Graphical User Interface
HIE	Healthcare Information Exchange
HIS	Hospital Information System
HL7 FHIR	Health Level-7 Fast Healthcare Interoperability Resources
IaaS	Infrastructure-as-a-Service
ICD - 10	International Classification of Diseases, Tenth Edition
ICT	Information and Communication Technology
IDSP	Integrated Disease Surveillance Programme

IHIP	Integrated Health Information Platform
IT	Information Technology
LOINC	Logical Observation Identifiers Names and Codes
MCIT	Ministry of Communication and IT
MCTS	Mother and Child Tracking System
MDDS	Metadata and Data Standard
MMP	Mission Mode Project
MoHFW	Ministry of Health and Family Welfare
MRI	Magnetic Resonance Imaging
NDA	Non-Disclosure Agreement
NeGP	National eGovernance Plan
NeHA	National eHealth Authority
NEMA	National Electrical Manufacturers Association
NHP	National Health Portal
NIHFW	National Institute of Health and Family Welfare
NIN	National Identification Number
PACS	Picture Archiving and Communication System
PAN	Permanent Account Number
ROC	Registrar of Companies
SITC	System Integration Testing & Commissioning
SMS	Short Message Service
SNOMED-CT	Systematized Nomenclature of Medicine -- Clinical Terms
SOA	Service Oriented Architecture

Receipt No : 337196/2016/MOHFW

Part I: General Terms

1. OBJECTIVE OF THIS REQUEST FOR EXPRESSION OF INTEREST (REOI)

1.1 Centre for Health Informatics (CHI) under Ministry of Health and Family Welfare (MoHFW) intends to invite Expression of Interest (EOI) from competent and prospective Information Technology (IT) solution providers (hereinafter called "proponent(s)") to indicate their interests in design, development, integration, deployment, implementation and maintenance of "Integrated Health Information Platform (IHIP)", a greenfield project by Government of India (GoI). Please refer Annexure -I for a note on IHIP's objectives, features, envisaged outcomes etc.

2. REOI ISSUING AUTHORITY

2.1 This REOI issued by the Project Director, CHI, intends to invite IT System Integrator **or** a consortium of such firms to indicate its interest in providing the requested services as outlined under Scope of Work in Part II. CHI's decision with regard to short-listing of proponent(s) through this REOI shall be final. CHI reserves the rights to reject any or all REOI's without assigning any reason.

Project Name	Design, Development, Integration, Deployment Implementation and Maintenance of Integrated Health Information Platform (IHIP)
Project Initiator Details	
Department	CHI, MoHFW
Contact Person	Prof. Suptendra Nath Sarbadhikari
-Contact Details	Project Director, CHI
-Phone	011- 26165959
-Email	supten@nihfw.org
Contact Person (Alternate)	Sh. Ankit Tripathi
	Additional Director, CHI
-Phone	011- 2616 5959 Ext. 264
-Email	at@nihfw.org
-Contact Details	National Institute of Health and Family Welfare (NIHFW)
	Baba Gang Nath Marg, Munirka,
	New Delhi -110067
	011- 2610 7773
Website	www.nhp.gov.in

3. TENTATIVE CALENDAR OF EVENTS

3.1 The following table enlists important milestones and timelines for completion of the activities:

S. No.	Milestone	Date
1	Release of Request for Expression of Interest (REOI)	18/08/2016
2	Last date for submission of written queries as per Form V	29/08/2016
3	Proponents' Meeting	02/09/2016
4	Last date for Submission of REOI Response	08/09/2016
5	Opening of REOI Responses	08/09/2016
6	Declaration of Shortlisted Proponents	To be intimated later

3.2 After submission of EOIs, the proponents may be requested to make presentation to CHI. Accordingly schedule for the presentation will be intimated later and also put on the website of MoHFW and NHP.

4. AVAILABILITY OF THE REOI DOCUMENT

4.1 The REOI document can be downloaded from the website of Ministry of Health and Family Welfare (MoHFW) www.mohfw.nic.in given under E-Citizen/Tender tab, National Health Portal (NHP) website www.nhp.gov.in and Central Public Procurement Portal website https://eprocure.gov.in. The proponent(s) are expected to examine all the instructions, forms, terms, project requirements and other details in the REOI document. Failure to furnish complete information as mentioned in the REOI documents or submission of the application not substantially responsive to the REOI documents in every respect will be at the proponent's risk and may result in rejection of the EOI.

5. PROPONENTS' MEETING

5.1 CHI will host a proponent's meeting in Delhi at the address given under *Contact Details* in *Section 2.* The meeting is tentatively scheduled as per the schedule given in *Section 3*. The representatives of the interested firms (restricted to two persons per firm) may attend the proponents' meeting at their own cost. The purpose of the meeting is to provide proponent

with any clarifications regarding the REOI. It will also provide each proponent with an opportunity to seek clarifications regarding any aspect of the REOI and the IHIP project.

6. PROCESSING FEE

6.1 A non-refundable processing fee for Rs.5,000 (Rupees Five Thousand only) in the form of a demand draft drawn in favor of the "***Project Director, CHI, payable at New Delhi"*** has to be submitted along with the response. EOI received without or with inadequate processing fee shall be liable to get rejected.

7. VENUE AND DEADLINE FOR SUBMISSION OF EOI

7.1 EOI, in its complete form in all respects as specified in the REOI, must be submitted to the Project Director, CHI, National Institute of Health and Family Welfare (NIHFW), Baba Gang Nath Marg, Munirka, New Delhi -110067. CHI may, in exceptional circumstances and at its discretion, extend the deadline for submission of EOI by issuing an addendum to be made available on the NHP and MoHFW websites (as mentioned above), in which case all rights and obligations of CHI and the proponents previously subject to the original deadline will thereafter be subjected to the deadline as extended.

8. NOTIFICATION OF CHANGES IN TERMS OF REOI

8.1 In case CHI decides to make any change in the terms (including pre-qualification criteria) of the REOI, the same shall be notified by issuing an addendum to be made available only on websites of MoHFW and NHP.

Receipt No : 337196/2016/MOHFW

Part II: Scope of Services

9. BACKGROUND

9.1 For effective adoption of ICT in Indian healthcare- aligned with health sector goals under Digital India Programme- need for integration of and interoperability amongst various Health IT systems and creation of electronic health records (EHRs) of citizens along with pan-India exchange has emerged critical. Most of the patient records have a decentralized storage and gets trapped in multiple silos such as primary care, specialist, hospitals, pharmacy, home health care etc. Keeping these issues in view, MoHFW has decided to establish an 'Integrated Health Information Platform (IHIP)'.

9.2 IHIP is envisaged to work in the direction of enabling creation of the electronic health records (EHRs) of citizens and making EHRs available nationwide (through exchange mechanism) with the help of a centralized accessible platform. This would facilitate continuity of care, confidential and secure health data/records management, better affordability, optimal information exchange to support better health outcome, better decision support system, fewer redundancies and medical errors, low data redundancy, big data analytics etc. A framework and mechanism for unique identification for patients, healthcare providers/organisations and medical procedures would be incorporated so as interoperability (and thence longitudinal aggregation of electronic medical records) is attained amongst different Health IT Systems.

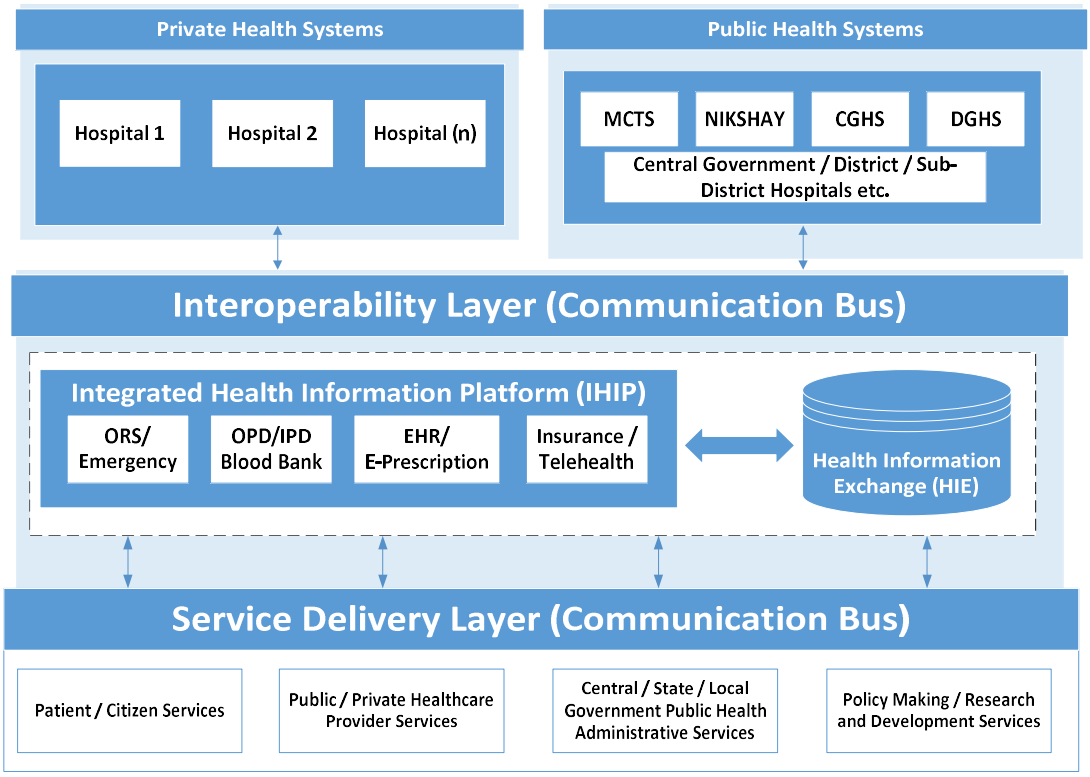
9.3 IHIP is proposed to encompass various components like eHealth applications, eHealth data and eHealth infrastructure. Business model for IHIP has been envisaged on the basis of a set of guiding principles - asset light platform, hiring infrastructure-as-a-service, offering application-as-a-service, cafeteria model of service offering on payment basis, and attaining financial sustainability in due course.

9.4 For eHealth applications - Healthcare Management, EMR, EHR- on IHIP, tried and tested open source solutions offered by third parties (both public and private IT vendors) and complying with EHR Standards (notified by MoHFW in 2013) and other eGovernance Standards (notified by Department of Electronics & Information Technology-DeitY) would be hosted on IHIP. Various developers including innovative start-ups can host their standards compliant applications/solution-suites on IHIP after due process of evaluation by the Ministry. Users can use the applications taking a 'Cafeteria Approach' i.e. to choose

application from available options as per their need on 'pay for use' basis. Detailing of envisaged business model for IHIP will be done at the stage of Request for Proposal (RFP). Individual hospitals and healthcare facilities/professionals will have to put in the required infrastructure – terminals, peripheral hardware etc. - in their premises in order to access and use IHIP.

9.5 Sustainability of IHIP is a critical aspect to be addressed properly. For ensuring sustainability, IHIP is planned to explore various possible revenue sources including from health information exchange platform like real-time data services to different healthcare providers, asynchronous data analytics /customized reports for health care analytics organizations etc. However, in short-to-medium term, funding assistance from the government may be provided, till it achieves a critical mass.

9.6 The various regulatory aspects like privacy, security, access, disclosure, exchange etc. would be taken care of by National eHealth Authority (NeHA) proposed to be set up by MoHFW. NeHA would also regulate other specifics like what information to be shared, within what timeline the information should be shared etc.



CONCEPTUAL DIAGRAM OF IHIP

10. SCOPE OF WORK

10.1 The scope of work encompasses:

- Designing of IHIP
- Development of IHIP & APIs required for interoperability
- Integration of different components of IHIP
- Deployment of IHIP
- Implementation (pilot in two states & five hospitals and then roll out pan-India) and thereafter maintenance of IHIP

The detailing of Scope of Work with deliverables and respective milestones will be done at RFP stage.

10.2 Proponent(s) should provide and maintain the solution in agreement with the following features:

10.2.1 Accessibility

a) A centralized web-based cloud compliant application with a simple and user friendly graphical user interface (GUI) for easy and fast mode of operation and usability. The application should be accessible by any Healthcare Service Provider organizations (both public and private), healthcare professionals, government and citizens via laptop, desktop, mobile applications on wired or wireless connectivity.

Note: *A comprehensive solution document consisting of the technical architecture solution for handling connectivity scenario, data handling capabilities/data sizing should be corresponded. Offline mode of operation needs to be proposed by the selected proponent.*

b) The IHIP framework will offer interface with various functional modules across different standards compliant Healthcare Management Information Systems hosted by third parties on IHIP. The various modules of healthcare management information system as offered by third parties & hosted on IHIP would include EHR related modules. An indicative list of such modules is given as below (the list is non-exhaustive):

- Out Patient Department (OPD) Module
- Admit Discharge and Transfer (ADT) Module
- In Patient Department (IPD) Module
- Emergency module
- Laboratory Information System (LIS) Module
- Radiology Information System (RIS) Module
- E-Prescription Module
- Telehealth Module
- External Application Module (wearable device and mobile application interface)

Note: *The above is non-exhaustive.*

IHIP would also require to ensure interface/data exchange (through middleware as needed) with HISs, which are not EHR Standards compliant, in order to ensure continuity of health records.

c) Our vision is to assign Unique Health Identifier (UHID) to individuals- proposed to be linked with the ADHAAR number and personal mobile number- and unique identifier for Healthcare Providers/Professionals. Additionally, other GoI issued identification numbers such as EPIC / Voter ID, Driving License, PAN, Passport, Ration Card etc. should also be linked for unique identification of the citizen for facilitating de-duplication of the assigned UHID to identify duplicate records for the same patient. The UHID number should also have an option of linkage with alternate ID's issued from various health facilities along with National Identification Number (NIN) assigned to Healthcare service providers (both public and private) of India.

d) Online account access via citizen portal hosted on NHP as part of IHIP application, for every citizen through which the past medical history/health record could be viewed, edited (except deletion) and uploaded by the citizens themselves in EHRs. Additionally, the portal should be capable of capturing patient/citizen's health data from various wearable devices and mobile application(s).

Note: *Users would not be allowed to perform Delete operations across the IHIP application. However, archival of the data would be permissible.*

e) Generation of analytics dashboards and reports via analytics tools for different types of

analytics using anonymized health data in order to facilitate effective policy-making decisions for public health at national level etc.

10.2.2 Interoperability

a) Platform architecture should be open, flexible and dynamic in nature with easy application programming interface (API) communication with other health information sources including HIS of various hospitals, laboratories, physician clinics, Emergency Ambulance services, AYUSH, MCTS, NIKSHAY-TB, IDSP, CGHS, and other third party EHR application(s) permitted to be hosted on IHIP only after due process of evaluation and approval of CHI or MoHFW.

Note: *The selected proponent would be expected to understand and identify the interface requirements including an API toolkit for integration between the existing as well as proposed solution.*

b) Generation of standards compliant Electronic Health Record (EHR) for every citizen. The application should perform real-time collection and aggregation of patient specific clinical data trapped in multiple silos from various sources including EMR modules of HIS systems at hospitals, individual physicians and other health professionals in order to improve quality of care by reducing duplication and manual transmission of data across different stakeholders/providers/hospitals.

c) A centralized storage layer, as required, of Health Information Exchange (HIE) for storing the heavy image data records (like X rays, CT scan, MRI, ECG, and Angioplasty) and consequently generating a link/metadata of the image data records for the health institutions in order to access these records. The health institutions may have local storage of such data for a given period of time in addition to the centralized HIE storage of the heavy image data records. In cases of patients getting referred to another hospital, the data captured from the hospital referred would be available in HIE storage layer.

d) Generation of timely alerts and notifications via Emails, Voice and SMS to all stakeholders. SMS Gateway should support both “Push and Pull” services.

e) Enterprise class master data management software, which will help to create a unique/ true copy of data removing all de-duplication of patient specific clinical / non-clinical health data from the database in order to enable ease of data warehousing and data management.

10.2.3 Scalability

The design & development and demonstration of the IHIP with concurrent adoption in pilot locations (two states & 5 hospitals) is envisaged over 7 months timeframe. After 3 months from start of the design & development of IHIP, the solution should be substantially ready for demonstration. After successful pilot, IHIP will be rolled across remaining States/UTs over the period of next 4 years. The system architecture should be capable for large scale adoption and an optimal approach for progressive nationwide roll-out.

Note: *The design of the application should allow easy addition of new functionality or features with minimal changes to the existing application.*

10.2.4 Security

The system developed should have adequate level of data privacy, cloud portability, and secure interoperability of data, when stored or retrieved or transmitted across the Health IT systems.

10.2.5 Audit Log

Maintenance of audit trail which would be a detailed record showing all the user-defined events of the application and the transactions / operations performed by the concerned user during a given period of time. Audit log must display the following details, but not limited to, with filter /sorting criteria options: (the list is non-exhaustive)

- Patient ID and User Name
- Module – Sub Module – Screen – Section – Field Name
- Date and Timestamp
- Updated Value

- Activity Performed

Note: *The audit log should be updated as per the mandated rule/law by GoI at any time.*

10.2.6 Response Center

A 24x7 support center for feedbacks, grievances (for both patients and users), technical or operational support. The response center would serve as a single point of contact for all ICT related incidents, service requests, feedbacks as well as suggestions. A ticket number would be issued against the logged complaint, incident, and grievances with the appropriate severity level and timely escalations to the concerned stakeholders. The bidder should propose an integrated CRM system to handle case management and also provide help to users using innovative technologies like chat, co-browse functionalities.

10.2.7 Standardization

a) The IHIP application should comply with the EHR Standards for India. Few of the standards are mentioned below (the list is non-exhaustive):

   i. Medical Image and Scanned Records Standards: NEMA DICOM PS3.0, PACS and Documentary data (scan for prescriptions, summaries etc.)

   ii. HL 7: To be used for exchange and seamless handling of inbound and outbound HL7 messages from any system that has similar capabilities; v2.x (V2) or v3.x (V3) or above. The proposed IHIP application would be adaptable for intermediate implementation of HL7 FHIR (whenever required).

   iii. Laboratory observations Standards: LOINC coding standards

   iv. WHO-FIC Standards: The WHO Family of International Classification (WHO-FIC) standards primarily used for aggregated information and statistical/epidemiological analysis reporting, for regulatory purposes as mandated by the health regulatory, intelligence, and various research bodies.

v. Clinical Healthcare Terminology Standards: SNOMED-CT coding is used to capture problem list, allergies, diagnosis, procedures etc. primarily used for clinical analytics and clinical decision support systems.

vi. WHO International Terminologies on Traditional Medicine Standards: For Ayurveda, Yoga, Unani, Siddha, Homeopathy systems of medicine (whenever notified).

Note: *Apart from above, the selected proponent needs to follow all the international and national industry standards.*

b) The proposed IHIP application would be based on the standards for Patient Identification such as MDDS for demographics, MDDS for health domain (whenever notified); Open Source solutions such as Open API, openEHR (whenever notified), Open Standards policy; Guidelines for Indian Government Websites (GIGW); and other relevant e-governance guidelines as per the norms suggested by DeitY, MCIT, Government of India.

11. TIMELINE

Design, Development & Demonstration of IHIP	T0+ 4 Months = (T1)
Pilot of IHIP in two States & 5 Hospitals	T1+ 3 Months = (T2)
Roll out of IHIP pan India	T2+ 48 Months

Part III: Terms of Reference (ToR) and Pre-Qualification Criteria

12. TERMS AND CONDITIONS UNDER WHICH THIS REOI IS ISSUED

a) This REOI is not an offer and is issued with no commitment. CHI reserves the right to withdraw the REOI and change or vary any part thereof at any stage. CHI also reserves the right to disqualify any proponent, should it be so necessary at any stage.

b) CHI reserves the right to withdraw this REOI if CHI determines that such action is in the best interest of the GoI.

c) Timing and sequence of events resulting from this REOI shall ultimately be determined by CHI.

d) No oral conversations or agreements with any official, agent, or employee of CHI shall affect or modify any terms of this REOI and any alleged oral agreement or arrangement made by a proponent with any department, agency, official or employee of CHI shall be superseded by the definitive agreement that results from this REOI process. Oral communications by CHI to proponents shall not be considered binding on CHI, nor shall any written materials provided by any person other than CHI.

e) Neither the proponent nor any of the proponent's representatives shall have any claims whatsoever against CHI or any of their respective officials, agents, or employees arising out of, or relating to this REOI or these procedures.

f) Proponents who are found to canvass, influence or attempt to influence in any manner the qualification or selection process, including without limitation, by offering bribes or other illegal gratification, shall be disqualified from the process at any stage.

g) Each applicant shall submit only one Pre-qualification requirement.

13. RIGHTS TO THE CONTENT OF THE EOI

For all the EOIs received before the last date and time of submission, the EOIs and accompanying documentation of the Pre-Qualification will become the property of CHI and will not be returned after opening of the EOI. CHI is not restricted in its rights to use or disclose any or all of the information contained in the EOI and can do so without compensation to the proponents. CHI shall not be bound by any language in the EOI indicating the confidentiality of the EOI or any other restriction on its use or disclosure.

14. ACKNOWLEDGEMENT OF UNDERSTANDING OF TERMS

By submitting an EOI, each proponent shall be deemed to acknowledge that it has carefully read all sections of this REOI, including all forms, schedules and forms hereto, and has fully informed itself as to all existing conditions and limitations.

15. EVALUATION OF PRE QUALIFICATION CRITERIA

The proponents' Pre-Qualification in the EOI document will be evaluated against the pre-qualification criteria specified in the REOI document. The proponents are required to submit all the supporting documentation as per the pre-qualification criteria specified (e.g. detailed project citations and completion certificates, client contact information for verification, profiles of project resources and all others) as required for evaluation.

16. LANGUAGE OF EOI

The EOI and all correspondence and documents shall be written in English.

17. PRE-QUALIFICATION CRITERIA

17.1 The proponent should be competent enough to be able to develop, manage and operate IHIP at State Level, Regional Level and Central Level HUBs of health facilities/centers by deploying appropriate technical manpower as per expected services.

17.2 Proponent should have the experience in implementing integrated health information application software conforming to Interoperability and Open Standards. In case the proponent offers off the shelf product, the proponent has to customize the software as per the need of CHI to ensure interoperability at National level.

17.3 Proponent may compete as a single entity or in a consortium. However, consortium should not include more than 3 members.

17.4 The selected proponent will be responsible to set up the integrated health information application infrastructure as per broader architecture and scope indicated in the REOI.

17.5 For selection, the proponent should meet all the criteria (no. 1 to 8) as outlined in the table below.

S. No	Criteria Required	Document
1	The Company / Consortium Members (in case of consortium) should be an entity registered in India under the Company Act, 1956 (or) a firm registered under the Limited Liability Partnership Act, 2008 (or) a firm registered under the Partnership Act, 1932 for last 5 years as on 31st March, 2016, and must have a registered office in India which should be in operation as on 31st March, 2016 In case of a consortium, the Lead Proponent would need to submit an agreement with the other	Certificates of Incorporation Consortium Agreement

S. No	Criteria Required	Document
	members of consortium for the contract clearly indicating the division of work and their relationship.	
2	The Proponent (Company/Consortium) must have a proven capability in design, development, integration, implementation, operations and maintenance of "Live" HIE systems and Healthcare Solutions (i.e. HIS, EMR, EHR) across large hospitals or networks of hospitals/healthcare facilities and should be handling/managing database of atleast 1,00,000 unique patient records (in format as per the EHR Standards and being compatible for aggregation, semantic interoperability etc.) as on date of submission of EOI. The HIE System should be for exchange between two or more disparate databases (HIS) of hospitals/networks of hospitals and should be capable of high volume exchange of data, image etc. For HIE capability purposes, application for exchange of data/records only within a network/chain/group of associated hospitals/ healthcare service providers or on a single database shall not be considered.	Satisfactory Completion of Works Certificates from the client(s) confirming the year of work, scope of work and work order details; **OR** Work Order + Phase Completion Certificate from the client(s) for the ongoing "Live" projects with their scope of work
3	The Company/Lead Proponent (in case of Consortium) must have executed a single project of total value atleast Rs.30 Crore (excluding hardware) in design, development, integration, implementation, operations and maintenance of HIE or Healthcare Solutions (i.e. HIS, EMR, EHR) in last five years.	

S. No	Criteria Required	Document
4	The Company / Lead Proponent of consortium should have Positive Net Worth as on 31st March 2016	Audited and Certified Balance Sheet of last 3 Financial Years (2013-14; 2014 – 15; 2015 – 16) **AND** Certificate from Chartered Accountant and Authorized Signatory
5	Average annual turnover of the Company/ Lead Proponent of consortium during the last three financial years 2013-14, 2014-15, 2015-16 from below mentioned Health-IT business streams (excluding turnover from hardware) should be at least Rs.30 Crore (as per the published Income Statement): □ Health Information Exchange System □ Hospital/Healthcare Management Information System □ IT enabled systems covering data integration, data warehousing and data management. In case of consortium, average annual turnover of each of the non-lead members during the last three financial years 2013-14, 2014-15, 2015-16 from the above mentioned Health-IT business streams (excluding turnover from hardware) should be at least Rs.10 Crore (as per the published Income Statement). In case of calendar year, 3 years up to December 2015 would be taken in to account	Certificate from statutory auditor appointed by the company (of last 3 Financial Years (2013-14; 2014 – 15; 2015 – 16)
6	The Company / Consortium Members should have a	□ Copy of Service Tax Registration

S. No	Criteria Required	Document
	valid Service Tax Registration and Income Tax returns and PAN card	□ Income Tax returns for last 3 financial years (till 2015-16) □ Audit report from CA for last 3 financial years (till 2015-16) □ Copy of PAN card
7	The Company / Consortium Members should not be under a declaration of ineligibility for corrupt and fraudulent practices issued by any of the Central or State Government Ministries / Departments, and should not have violated / infringed upon any Indian or foreign trademark, patent, registered design or other intellectual property rights	Undertaking (Self Certification) on company letter head certified by authorized signatory.
8	The Company/ Consortium Members should be a CMMI Level 5 certified.	Copy of the certificate from authorized certifying agency. The certificate should be valid as on 31st March 2016.

18. RESPONSE REQUIREMENTS

18.1 The Response to the Pre-Qualification Requirements shall be prepared in accordance with the requirements specified in this REOI and in the format prescribed in this document for each of the above mentioned qualifying criteria as proof of having the minimum requirements. EOI must be direct, concise, and complete. All information not directly relevant to this REOI should be omitted.

18.2 The EOI shall be sealed and super scribed "Response to Pre-Qualification Requirements – Design, Development, Integration, Deployment, Implementation and Maintenance of Integrated Health Information Platform (IHIP)" on the top right hand corner and addressed to CHI at the address specified in this document.

18.3 The EOI should be submitted with two printed copies of the entire EOI, one marked ORIGINAL and the second one as DUPLICATE and a soft copy on non-rewriteable compact discs (CDs) with all the contents of the pre-qualification REOI. The words "Response to Pre-Qualification Requirements – Design, Development, Integration, Deployment, Implementation and Maintenance of Integrated Health Information Platform (IHIP)" shall be written in indelible ink on the CD. The Hard Copy shall be signed by the authorized signatory on all the pages before being put along with the CD in the envelope and sealed.

18.4 In case of discrepancies between the information in the printed version and the contents of the CDs, the printed version of the pre-qualification EOI will prevail and will be considered as the EOI for the purpose of evaluation.

18.5 The EOI should contain the copies of references and other documents as specified in the REOI. A technical write-up or proof of concept should be included in the envelop.

18.6 A board resolution authorizing the signatory of EOI to sign as a binding document and also to execute all relevant agreements forming part of EOI should be included in the envelop.

18.7 CHI will not accept delivery of EOI in any manner other than that specified in this REOI. EOI delivered in any other manner shall be treated as defective, invalid and rejected.

19. PRE-QUALIFICATION REQUIREMENTS

19.1 The EOI should be submitted in the sealed envelope with the following details. Proponents are requested to submit their responses for the Pre- Qualification Requirements in 3 parts, clearly labelled according to the following categories:

i. **Part I – Covering Letter, Processing Fee, and Board Resolution/Power of Attorney**

a) Covering Letter from the Proponent as per the format provided in Form I.

b) A non-refundable processing fee of Rs. 5,000 (Rupees Five Thousand only) in the form of a demand draft should be included in the envelop.

c) A board resolution authorizing the signatory of EOI to sign as a binding document and also to execute all relevant agreements forming part of EOI should be included in the envelop.

ii. Part II – Details of the Organization

a) This part must include a general background of the respondent organization along with other details of the organization as per the format provided in the REOI (Form II). Enclose the mandatory supporting documents listed in format.

b) The proponent must also provide the financial details of the organization as per format provided in the REOI (Form III). Enclose the mandatory supporting documents listed in format.

iii. Part III – Similar Project Experience

Respondents must provide details (client organization, nature / scope of the project, project value) of IT enabled healthcare project experience in line with the pre-qualification criteria outlined as above, as per the format provided in the REOI (Form IV). The projects mentioned here should match with the projects quoted by the respondent in order to satisfy the qualification requirements. Enclose the mandatory supporting documents listed in format.

Receipt No : 337196/2016/MOHFW

Part IV: Response Formats

FORM I: COVERING LETTER

[On Company Letterhead]

[Location, Date]

To:

Prof. Suptendra Nath Sarbadhikari

The Project Director

Centre for Health Informatics

National Institute of Health and Family Welfare

Baba Gang Nath Marg,

Munirka

New Delhi 110067

Subject: Expression of Interest for the Integrated Health Information Platform (IHIP).

Dear Sir,

We, the undersigned, offer to provide the Design, Development, Implementation, Integration, Deployment and Maintenance of "Integrated Health Information Platform (IHIP)" in accordance with your Request for Expression of Interest dated [__/__/2016] and our response.

2. Primary and Secondary contacts for our company are:

	Primary Contact	Secondary Contact
Name:		
Title:		
Company Name:		
Address		
Phone:		
Mobile:		
Fax:		

3. We are hereby submitting our Expression of Interest (EOI) in both printed format and as a soft copy in a CD. We understand you are not bound to accept any EOI you receive.

4. We confirm that the information contained in this response or any part thereof, including its exhibits, and other documents and instruments delivered or to be delivered to CHI is true, accurate, verifiable and complete. This response includes all information necessary to ensure that the statements therein do not in whole or in part mislead the department in its short-listing process.

5. We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the short-listing process or unduly favour our company in the short-listing process, we are liable to be dismissed from the selection process or termination of the contract during the project, if selected to do so, for undertaking the work to design, develop, implement, and system integration testing and commissioning (SITC), operations and maintenance for the nation level rollout of the IHIP Project.

6. We agree to abide by the conditions set forth in this REOI.

7. It is hereby confirmed that

I/We are entitled to act on behalf of our corporation/company/ firm/organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Dated this, Day of, 2016

(Signature) (In the capacity of)

Duly authorized to sign the REOI Response for and on behalf of: Sincerely,

[Name]

[Title Signature Date]

(Name and Address of Company) Seal/Stamp of the Company(s) / Lead Proponent

CERTIFICATE AS TO AUTHORISED SIGNATORIES

I, ……, certify that I am …… of……,and that…… who has signed the above response is authorized to bind the corporation by authority of its governing body.

[Date]

(Name and Address of Company) Seal/Stamp of the Company(s) / Lead Proponent

FORM II: GENERAL DETAILS OF THE ORGANISATION

Details of the Organization	
Name of organization	
Nature of the legal status in India	
Legal status reference details	
Nature of business in India	
Date of Incorporation	
Date of Commencement of Business	
Address of the Headquarters	
Address of the Registered Office in India	
Other Relevant Information	

Mandatory Supporting Documents:

a) Certificate of Incorporation from Registrar Of Companies (ROC)

b) A certificate from the Chartered Account must be attached as a proof of annual turnover of the Company/Consortium Members for last 3 financial years (till FY2015-16).

c) A certificate from the Chartered Account must be attached as a proof of positive Net Worth as on 31st March 2016

d) Undertaking (Self Certification) that the Company(s) / Members of consortium has never been engaged themselves in any corrupt and fraudulent practices and has never been blacklisted by any Central /State Government Departments.

e) Company(s) / Members of consortium should not have violated / infringed upon any Indian or foreign trademark, patent, registered design or other intellectual property rights. A self-certificate should be provided by the proponent.

FORM III: FINANCIAL DETAILS OF THE ORGANIZATION

Financial Information			
	FY 2013-14	**FY 2014-15**	**FY 2015-16**
Revenue (in INR crores) from Health-IT businesses (excluding turnover from hardware) from the following three business streams: □ Health Information Exchange System □ Hospital/Healthcare Management Information System □ IT enabled systems covering data integration, data warehousing and data management.			
Profit Before Interest, Tax, Depreciation & Amortization (in INR crores)			
Any Other Relevant Information			
Mandatory Supporting Documents: Audited and Certified Balance Sheet of last 3 Financial Years (2013-14; 2014 – 15; 2015 – 16) must be attached. The Net worth of the company should be positive as on 31/03/2016.			

FORM IV: SIMILAR PROJECT EXPERIENCE

Project Experience	
General Information	
Name of the project	
Client for which the project was executed	
Name and contact details of the client	
Current Status	
Project Details	
Description of the project	
Geographical Scope	
Outcomes of the Project	
Applications	
Technologies Used	
Infrastructure	
Operations and Services	
Number of Locations / Sites	
Other Details	
Duration of Implementation (post selection)	
Total Duration of the project (no. of months, start date, completion date)	
Total cost of the project	
Total cost of the services provided by the Proponent	
Other Relevant Information	
Mandatory Supporting Documents: a. Work Orders / Client Certificate (including the cost details of the project excluding hardware components) confirming year and domain of activity should be attached. Supporting documents for cost of project undertaken to be provided. In case of foreign currency projects, the project value should be shown in INR as per the conversion rate prevailing at the time of award of the work order. b. The Company(s) / Lead Proponent should produce the "satisfactory completion of works certificate" from the clients in reference to the works they have cited.	

c. Complete details of the scope of the project should be provided to indicate the relevance to the prequalification criterion (which is part of minimum qualification criteria).

FORM V: QUERY FORM

S. No.	Part/ Section/ Item No of REOI	Clarifications Requested	Remarks

Annexure – I

Integrated Health Information Platform (IHIP)

Introduction

This Concept Note outlines objectives, components along with high level architecture, business model, implementation framework, cost elements and estimate etc. for the proposed Integrated Health Information Platform (IHIP). It has been prepared based on DPR of Health MMP, discussions held in meeting of Steering Committee on eHealth, deliberations held with MoHFW's officials/ DeitY/Experts/ Solution Vendors etc., and review of select relevant documents available through desk research.

Background

During the last two years, a detailed exercise had been undertaken for scoping and preparation of project report for comprehensive adoption of ICT in Indian healthcare under Health Mission Mode Project (MMP)-aligned with Digital India Programme and E-Kranti (NeGP 2.0). It emphasized primarily upon the need for integration of and interoperability amongst various Health IT systems and creation of electronic health records (EHRs) of citizens along with pan-India exchange.

Creation of EHRs of citizens and establishment of supporting infrastructure/ mechanism for exchange of health records emerges as one of the key focus areas under the plan for comprehensive use of ICT in healthcare. Accordingly, in the meeting of Steering Committee on eHealth held on 27th July, 2015, it was deliberated and decided to establish an 'Integrated Health Information Platform' primarily focusing on interoperable EHRs and subsequently to encompass other key components of eHealth, as feasible, like Drug Supply Chain Management, Citizen Portal etc., as underlined in Health MMP DPR.

Issues to be addressed

It has been observed those healthcare organizations are mostly operating in data-rich but information-poor environment. Patient health data is being gathered / stored - distributed over a number of locations and via a number of IT solutions - which is generally inaccessible, improperly formatted/not standardized and hence not interoperable. System interoperability along with supportive IT frameworks and optimal information exchange to support better healthcare services and thus outcomes is the key requirement in the prevailing scenario. Also need is there for transforming data into information and evidence, which could help in decision support systems (DSSs).

Multiple data sources need to be integrated in meaningful ways to improve services in relation to access, quality, user satisfaction and efficiency. With information sharing, volumes of independent sets of data across multiple systems can be brought together in integrated, relevant and useful summary views. Integrated data can be de-identified and aggregated in such a way to enable policy-making decisions at public health level. The current focus is more on "pushing" vs "pulling" data, which often leads to ineffective data sharing and impedes care quality and efficiency impacting outcomes.

Key issues need to be addressed
Fragmented information streams/systems
Quality of data
Large volume of data collected
Duplication of data collection – *Data Redundancy*
Sub-optimal resource utilisation due to duplicate information systems
Lack of interoperability and accessibility of information
Lack of unique identifiers for patients, providers and health facilities
'Push' vs. 'Pull' model of data sharing
No common EHR system

It is essential that information can be accessed from anywhere in the health system to facilitate seamless communication in between different stakeholders like patient-to-provider, provider-to-provider, provider-to-health managers/government agencies, government/provider-to-academia etc. Data should only be recorded once, at its source

(single instance capture), the systems need to be sustainable, data must be standardized and understandable and the system needs to be available locally

Objectives of IHIP and Outcome envisaged

The overall and ultimate purpose of setting up IHIP is to facilitate better health services to citizens, improve efficiency for healthcare services and health programmes by optimum utilization of resources, availability of information/data – in secure manner and on real time

The specific objectives envisaged to be achieved through IHIP include:

- To leverage information and communication technologies (ICTs), aligned with health care goals under Digital India Programme and E-Kranti, meeting the requirements of different stake-holder groups- citizens, providers, policy makers and program managers

- To set-up a health information technology platform hosted on Cloud which has integrated and inter-operable standards compliant and open source healthcare management applications along with infrastructure/services for health information highway

- To enable real time collection and aggregation of data in an efficient and effective manner and to facilitate exchange of data across systems and stake-holders by establishing a framework for unique identification for patients, providers/health facilities and medical procedures.

- To facilitate improvement in quality/continuity and affordability of care through interoperable EHRs and better utilization of resources

- To enable effective and efficient management of population health through real time aggregated data

The key outcomes/benefits envisaged from IHIP for different stake-holder groups include:

Stakeholder group	Outcome/ benefits
Citizen / Patient	• Continuity of care • Confidential and secure health data/records management • Better affordability-by avoiding redundant examination/ tests/procedures
Healthcare Providers	• Availability of real time and standardised data/information • Optimal information exchange to support better health outcome • Better decision support system • Fewer redundancies and medical errors
Payers	• Better and smoother management of billing and claims processes • Enhanced precision and speed of coverage payments to healthcare service • Better analysis of cost-effectiveness of coverage policies • Business intelligence and more sophisticated data analysis towards better coverage policies planning etc.
Government/ Health Managers	• Reduced duplication of data (single instance capture) - low data redundancy • Less fragmentation and more standardisation health information systems • Strengthening of evidence base for effective policies • Big data analytics – Dashboards for Monitoring and Evaluations facilitating effective decision making

Components and Architecture

The various design aspects – in line with the prevailing challenges - considered while conceptualizing IHIP include the following:

Integration of multiple systems – primarily patient centric- working in silos
Data capturing at source in digital format
Sharing and aggregation of quality data with minimum latency across applications and stake-holders
Availability of uniquely identifiable, easily traceable and verifiable data/records in the system
Access to quality data to health managers, policy makers etc. capturing various parameters linked with determinants of health for effective and efficient healthcare delivery

In line with the envisaged objectives, IHIP is proposed to encompass various components grouped as **eHealth applications -** describing tools and systems that will be used by users to interact with the system or for data processing; **eHealth data -** describing major data items and data that will be shared between components; and **eHealth infrastructure**: describing computing infrastructure required to support eHealth solutions.

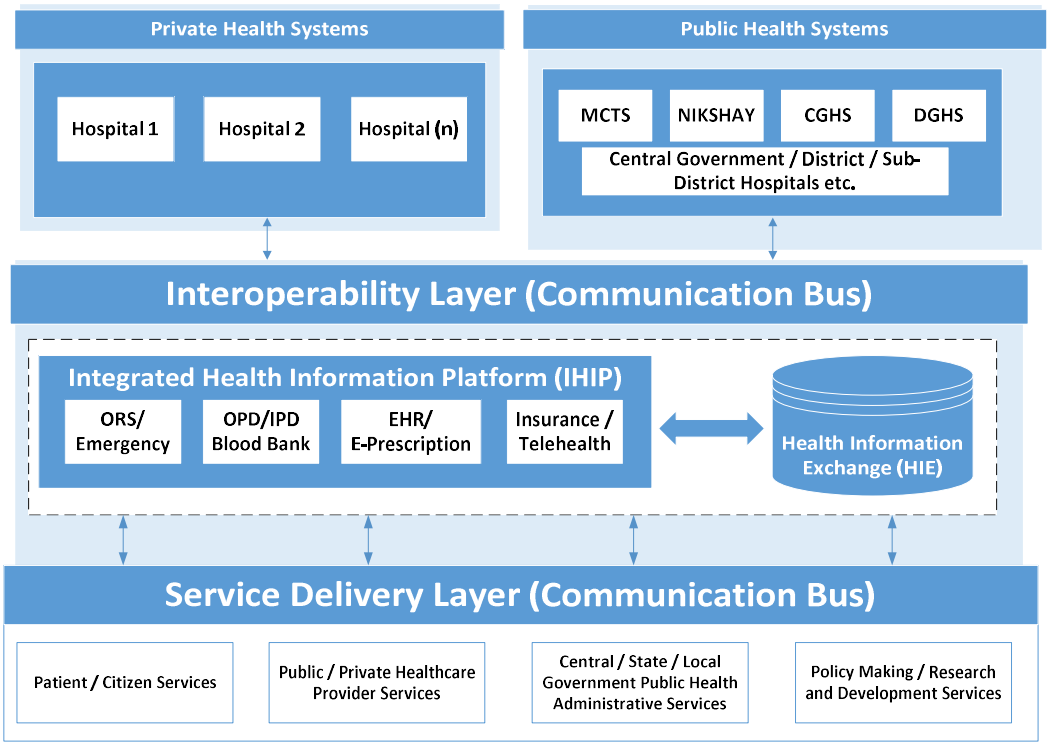
Category	Brief
eHealth applications	
Application / Solution	• To meet various requirements related to creation of EHR through 'suite for digital health records creation and management' consisting of[1]: o Hospital information management/ Clinical administration/Electronic medical records o Remote patient monitoring – through internet-of-things; wearable devices, M2M technologies etc. o Telehealth

[1] Given on illustrative basis; suite may include all or some

Category	Brief
	○ E-commerce- billing, payment, insurance claims etc. ○ Patient communications – SMS, emails, voice ○ Business intelligence and Analytics ○ Etc. For eHealth applications on IHIP, tried and tested open source solutions offered by third parties (both public and private IT vendors) and complying with EHR Standards (notified by MoHFW in 2013) and other eGovernance Standards (notified by Department of Electronics & Information Technology-DeitY) would be hosted on IHIP. Various developers including innovative start-ups can host their standards compliant applications/solution-suites on IHIP after due process of evaluation by the Ministry. Users can use the applications taking a 'Cafeteria Approach' i.e. to choose application from available options as per their need on 'pay for use' basis. • Also to include Public Health Applications/Systems having interface with patient/citizen health records –those related to disease control/immunisation like Mother and Child Tracking System , TB Control Pogramme etc.
Information Exchange	• To facilitate exchange of information between different EMR systems • To connect to a database in which the medical records of the patients are collected from multiple providers and consolidated together • Exchange between patients, healthcare providers, payers, medical data providers
eHealth infrastructure	
Hosting environment and Database management	• Hosting of servers -application, database- on 'Cloud' • User of IHIP doesn't need to own servers/ storage/database

Category	Brief
Standards	• Compliance of applications to EHR Standards, Open Source Software Policy, Open API Policy, other relevant eGovernance Standards
Privacy and Security	• Patient consent/ permissions • Disclosure management
eHealth data	
Registry / Identifiers	• Unique identifiers for patients, providers, health facilities
Repositories	• Health records

A conceptual diagram representing the fundamental organization of IHIP's components, their logical relation to each other/other systems and their inter-dependencies has been outlined and presented as below. These components need to interact amongst themselves according to a certain plan or design.



CONCEPTUAL DIAGRAM OF IHIP

Annexure – II

National Identification Number (NIN)

Overview

In view of the key challenge highlighted in Health MMP DPR that health information and patient records with different Health IT systems remain trapped in silos (having virtually no inter-operability) in absence of a common identifier in the different databases, detailed discussions were held with different divisions, states and NIC. After detailed discussions and consultation, it has been decided to generate and assign unique number i.e. National Identification Number (NIN) to each of the health facilities (both public and private) in order to facilitate interoperability and information exchange between different IT systems. It is also critical for creation of electronic health records of citizens.

National Identification Number (NIN):

National Identification Number (NIN) for Health facilities of India is a random 10-digit number generated for each facility and will be unique within India. NIN is generated on the basis of LUHN algorithm where the last digit is the checksum and the rest nine digits are the random number generated. In order to identify the geographic location of the health facility attributes like state, district, taluka, village based on MDDS (Meta Data and Data Standards) codes will be attached to NIN. The Process of the generation of NIN number has been initiated by Centre for Health Informatics (CHI) in collaboration with NIC (NIC has provided basic software for NIN generation). The further development will be done by CHI as per needs and future requirements. The National Identification Number (NIN) would be in compliance with the MDDS[2] for Health domain as notified by DeitY.

Definition of the Health Facilities to be covered:

Health Facility means all Government, Private including allopathic, Ayurveda, Homeopathy, Sidha, Unani, Yoga Hospitals, clinics, diagnostic laboratories, blood banks etc.

[2]NIN will follow Metadata and Data Standards (MDDS) for semantic interoperability, when MDDS for Health Domain is notified. It will adopt Demographics MDDS, notified by DeitY, as relevant.

Structure of NIN:

- It is 10 Digit Unique Number given to each Health Facility.
- 9 digits are random number followed by 1 digit check-sum number
- First digit is never 0

Action Plan for NIN generation, Validation and Adoption:

S. No.	Action Items
1.	Verification of data related to Health Facilities from different sources.
2.	Allocation of National Identity Number (NIN) to each Health Facility of India (HFI)
3.	All ICT Systems in Health Sector (Central, State, Private) to use NIN prospectively in new systems in order to achieve interoperability and seamless information exchange
4.	States /UTs to take necessary steps to incorporate NIN in their existing systems
5.	Integration with Clinical Establishment Registration and Regulation System (CERRS).

Receipt No : 346610/2016/E-GOV

Subject: **Approval for Request for Expression of Interest (REOI) for "Design, Development, Integration, Deployment, Implementation and Maintenance of Integrated Health Information Platform (IHIP)" and its Technical Evaluation Committee (TEC).**

Date: 08/22/16 06:34 PM

From: "Amit Kumar" <amit.k89@gov.in>

To: supten@gmail.com, at@nihfw.org

Cc: Director <director@nihfw.org>, Jitendra Arora <jitendra.arora@gov.in>, Jitendra Arora <dir.ehealth@gmail.com>, Indu <indubharwal89@yahoo.in>

Approval for IHIP REoI.pdf (370kB) Expression of Interest_IHIP_11_08_2016_Final.pdf (927kB)
Expression of Interest_IHIP_11_08_2016_v4.1.docx (313kB)

Sir,

Please find attached the approved REOI for "Design, Development, Integration, Deployment, Implementation and Maintenance of Integrated Health Information Platform (IHIP)" and composition of its Technical Evaluation Committee (TEC).

Regards
Amit Kumar
Assistant Director (eGovernance)
Ministry of Health & Family Welfare
Room No. 213D
Nirman Bhawan
New Delhi – 110 011
Tel: 011 – 2306 2263
Mobile: 9582861973

Receipt No : 346610/2016/E-GOV

Q-11013/4/2016-eGov
Government of India
Ministry of Health & Family Welfare
(eGovernance Division)
*****

Nirman Bhawan, New Delhi.
Dated: 22.08.2016

To,

Project Director,
(Prof. Supten Sarbadhikari)
Centre for Health informatics (CHI)
National Institute of Health and Family Welfare,
Baba Gang Nath Marg, New Mehrauli Road
Munirka, New Delhi-110067

Subject: Approval for Request for Expression of Interest (REOI) for "Design, Development, Integration, Deployment, Implementation and Maintenance of Integrated Health Information Platform (IHIP)" and its Technical Evaluation Committee (TEC).

Sir,

I am directed to refer to the letter from CHI, NIHFW seeking approval for publishing the Request for Expression of Interest (REOI) for "Design, Development, Integration, Deployment, Implementation and Maintenance of Integrated Health Information Platform (IHIP)"

2. In this regard, it is informed that the Request for Expression of Interest (REOI) document has been approved. The revised and approved REOI document is enclosed for publishing for selection of the service provider for Health IT solutions.

3. Further, for evaluating the responses, a Technical Evaluation Committee (TEC) has been constituted with the following composition:

1.	Sh. Sunil Sharma, JS(eGov), MoHFW	**Chairman**
2.	Dr. Deepak Agarwal, Additional Professor (Neurosurgery) Chairman Computerization, AIIMS	Member
3.	Dr. C. Jayan, Joint Director, e-Health, Kerala	Member
4.	Sh. Vinay Thakur, Director, NeGD, DeitY	Member
5.	An Expert on Big Data Analytics	Member
6.	An ICT expert from IIT/NIT/regional engineering institutes/ Management institutes of prominence.	Member
7.	Shri Gaur Sunder, PTO, C-DAC, Pune	Member
8.	Prof. S N Sarbadhikari, Project Director, CHI, NIHFW	Member
9.	Shri S.K. Sinha, STD, NIC, MoHFW	Member
10.	Shri Ankit Tripathi, Additional Director, CHI, NIHFW	Member
11.	Shri Jitendra Arora, Director (e-Gov), MoHFW	**Member Convener**

4. The Terms of Reference (ToR) of the committee are as given below:

i. Review, evaluate and finalize RFP documents.
ii. Technical review of the eligibility of participating agencies and short listing of eligible agencies to whom RFP document would be issued.
iii. Participate in the pre-bid meeting and clarify queries and observations of the agencies.
iv. Laying down criteria for technical evaluation of the bids/proposals (in line with the Detail Project Report (DPR) of Health MMP approved by MoHFW).
v. Evaluation of the bids/proposals received in line with the technical evaluation criteria approved.

5. This issues with the approval of Joint Secretary (eGov).

Yours faithfully,

(Jitendra Arora)
Director(eGov)

Copy to:-

Director (NIHFW), New Delhi

Request for
Expression of Interest (REOI)
for
"Design, Development, Integration, Deployment, Implementation and Maintenance of Integrated Health Information Platform (IHIP)"

सत्यमेव जयते

Centre for Health Informatics

Ministry of Health and Family Welfare

Government of India

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5. FORM V: QUERY

ABBREVIATIONS AND ACRONYMS

API	Application Programming Interface
CGHS	Central Government Health Scheme
CHI	Centre for Health Informatics
CT	Computerized Tomography
DeitY	Department of Electronics and Information Technology
DICOM	Digital Imaging and Communications in Medicine
ECG	Electrocardiogram
EHR	Electronic Health Record
eHeath	Electronic Health i.e. use of ICT in healthcare
REOI	Request for Expression of Interest
EPIC	Electoral Photo Identity Card
GIGW	Guidelines for Indian Government Websites
GoI	Government of India
GUI	Graphical User Interface
HIE	Healthcare Information Exchange
HIS	Hospital Information System
HL7 FHIR	Health Level-7 Fast Healthcare Interoperability Resources
IaaS	Infrastructure-as-a-Service
ICD - 10	International Classification of Diseases, Tenth Edition
ICT	Information and Communication Technology
IDSP	Integrated Disease Surveillance Programme

IHIP	Integrated Health Information Platform
IT	Information Technology
LOINC	Logical Observation Identifiers Names and Codes
MCIT	Ministry of Communication and IT
MCTS	Mother and Child Tracking System
MDDS	Metadata and Data Standard
MMP	Mission Mode Project
MoHFW	Ministry of Health and Family Welfare
MRI	Magnetic Resonance Imaging
NDA	Non-Disclosure Agreement
NeGP	National eGovernance Plan
NeHA	National eHealth Authority
NEMA	National Electrical Manufacturers Association
NHP	National Health Portal
NIHFW	National Institute of Health and Family Welfare
NIN	National Identification Number
PACS	Picture Archiving and Communication System
PAN	Permanent Account Number
ROC	Registrar of Companies
SITC	System Integration Testing & Commissioning
SMS	Short Message Service
SNOMED-CT	Systematized Nomenclature of Medicine -- Clinical Terms
SOA	Service Oriented Architecture

Part I: General Terms

1. OBJECTIVE OF THIS REQUEST FOR EXPRESSION OF INTEREST (REOI)

1.1 Centre for Health Informatics (CHI) under Ministry of Health and Family Welfare (MoHFW) intends to invite Expression of Interest (EOI) from competent and prospective Information Technology (IT) solution providers (hereinafter called "proponent(s)") to indicate their interests in design, development, integration, deployment, implementation and maintenance of "Integrated Health Information Platform (IHIP)", a greenfield project by Government of India (GoI). Please refer Annexure -I for a note on IHIP's objectives, features, envisaged outcomes etc.

2. REOI ISSUING AUTHORITY

2.1 This REOI issued by the Project Director, CHI, intends to invite IT System Integrator **or** a consortium of such firms to indicate its interest in providing the requested services as outlined under Scope of Work in Part II. CHI's decision with regard to short-listing of proponent(s) through this REOI shall be final. CHI reserves the rights to reject any or all REOI's without assigning any reason.

Project Name	Design, Development, Integration, Deployment Implementation and Maintenance of Integrated Health Information Platform (IHIP)
Project Initiator Details	
Department	CHI, MoHFW
Contact Person	Prof. Suptendra Nath Sarbadhikari
-Contact Details	Project Director, CHI
-Phone	011- 26165959
-Email	supten@nihfw.org
Contact Person (Alternate)	Sh. Ankit Tripathi
	Additional Director, CHI
-Phone	011- 2616 5959 Ext. 264
-Email	at@nihfw.org
-Contact Details	National Institute of Health and Family Welfare (NIHFW)
	Baba Gang Nath Marg, Munirka,
	New Delhi -110067
	011- 2610 7773
Website	www.nhp.gov.in

3. TENTATIVE CALENDAR OF EVENTS

3.1 The following table enlists important milestones and timelines for completion of the activities:

S. No.	Milestone	Date
1	Release of Request for Expression of Interest (REOI)	18/08/2016
2	Last date for submission of written queries as per Form V	29/08/2016
3	Proponents' Meeting	02/09/2016
4	Last date for Submission of REOI Response	08/09/2016
5	Opening of REOI Responses	08/09/2016
6	Declaration of Shortlisted Proponents	To be intimated later

3.2 After submission of EOIs, the proponents may be requested to make presentation to CHI. Accordingly schedule for the presentation will be intimated later and also put on the website of MoHFW and NHP.

4. AVAILABILITY OF THE REOI DOCUMENT

4.1 The REOI document can be downloaded from the website of Ministry of Health and Family Welfare (MoHFW) www.mohfw.nic.in given under E-Citizen/Tender tab, National Health Portal (NHP) website www.nhp.gov.in and Central Public Procurement Portal website https://eprocure.gov.in. The proponent(s) are expected to examine all the instructions, forms, terms, project requirements and other details in the REOI document. Failure to furnish complete information as mentioned in the REOI documents or submission of the application not substantially responsive to the REOI documents in every respect will be at the proponent's risk and may result in rejection of the EOI.

5. PROPONENTS' MEETING

5.1 CHI will host a proponent's meeting in Delhi at the address given under *Contact Details* in *Section 2*. The meeting is tentatively scheduled as per the schedule given in *Section 3*. The representatives of the interested firms (restricted to two persons per firm) may attend the proponents' meeting at their own cost. The purpose of the meeting is to provide proponent

with any clarifications regarding the REOI. It will also provide each proponent with an opportunity to seek clarifications regarding any aspect of the REOI and the IHIP project.

6. PROCESSING FEE

6.1 A non-refundable processing fee for Rs.5,000 (Rupees Five Thousand only) in the form of a demand draft drawn in favor of the "***Project Director, CHI, payable at New Delhi"*** has to be submitted along with the response. EOI received without or with inadequate processing fee shall be liable to get rejected.

7. VENUE AND DEADLINE FOR SUBMISSION OF EOI

7.1 EOI, in its complete form in all respects as specified in the REOI, must be submitted to the Project Director, CHI, National Institute of Health and Family Welfare (NIHFW), Baba Gang Nath Marg, Munirka, New Delhi -110067. CHI may, in exceptional circumstances and at its discretion, extend the deadline for submission of EOI by issuing an addendum to be made available on the NHP and MoHFW websites (as mentioned above), in which case all rights and obligations of CHI and the proponents previously subject to the original deadline will thereafter be subjected to the deadline as extended.

8. NOTIFICATION OF CHANGES IN TERMS OF REOI

8.1 In case CHI decides to make any change in the terms (including pre-qualification criteria) of the REOI, the same shall be notified by issuing an addendum to be made available only on websites of MoHFW and NHP.

Part II: Scope of Services

9. BACKGROUND

9.1 For effective adoption of ICT in Indian healthcare- aligned with health sector goals under Digital India Programme- need for integration of and interoperability amongst various Health IT systems and creation of electronic health records (EHRs) of citizens along with pan-India exchange has emerged critical. Most of the patient records have a decentralized storage and gets trapped in multiple silos such as primary care, specialist, hospitals, pharmacy, home health care etc. Keeping these issues in view, MoHFW has decided to establish an 'Integrated Health Information Platform (IHIP)'.

9.2 IHIP is envisaged to work in the direction of enabling creation of the electronic health records (EHRs) of citizens and making EHRs available nationwide (through exchange mechanism) with the help of a centralized accessible platform. This would facilitate continuity of care, confidential and secure health data/records management, better affordability, optimal information exchange to support better health outcome, better decision support system, fewer redundancies and medical errors, low data redundancy, big data analytics etc. A framework and mechanism for unique identification for patients, healthcare providers/organisations and medical procedures would be incorporated so as interoperability (and thence longitudinal aggregation of electronic medical records) is attained amongst different Health IT Systems.

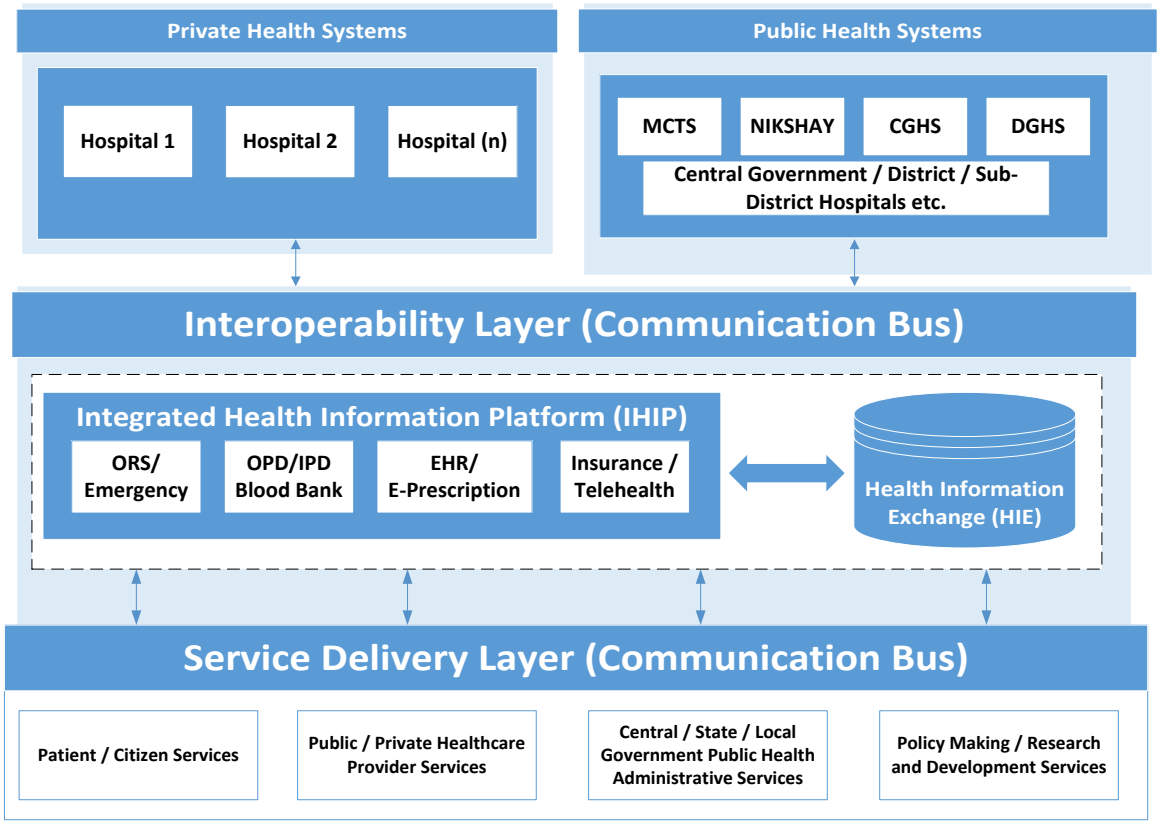
9.3 IHIP is proposed to encompass various components like eHealth applications, eHealth data and eHealth infrastructure. Business model for IHIP has been envisaged on the basis of a set of guiding principles - asset light platform, hiring infrastructure-as-a-service, offering application-as-a-service, cafeteria model of service offering on payment basis, and attaining financial sustainability in due course.

9.4 For eHealth applications - Healthcare Management, EMR, EHR- on IHIP, tried and tested open source solutions offered by third parties (both public and private IT vendors) and complying with EHR Standards (notified by MoHFW in 2013) and other eGovernance Standards (notified by Department of Electronics & Information Technology-DeitY) would be hosted on IHIP. Various developers including innovative start-ups can host their standards compliant applications/solution-suites on IHIP after due process of evaluation by the Ministry. Users can use the applications taking a 'Cafeteria Approach' i.e. to choose

application from available options as per their need on 'pay for use' basis. Detailing of envisaged business model for IHIP will be done at the stage of Request for Proposal (RFP). Individual hospitals and healthcare facilities/professionals will have to put in the required infrastructure – terminals, peripheral hardware etc. - in their premises in order to access and use IHIP.

9.5 Sustainability of IHIP is a critical aspect to be addressed properly. For ensuring sustainability, IHIP is planned to explore various possible revenue sources including from health information exchange platform like real-time data services to different healthcare providers, asynchronous data analytics /customized reports for health care analytics organizations etc. However, in short-to-medium term, funding assistance from the government may be provided, till it achieves a critical mass.

9.6 The various regulatory aspects like privacy, security, access, disclosure, exchange etc. would be taken care of by National eHealth Authority (NeHA) proposed to be set up by MoHFW. NeHA would also regulate other specifics like what information to be shared, within what timeline the information should be shared etc.



10. SCOPE OF WORK

10.1 The scope of work encompasses:

- Designing of IHIP
- Development of IHIP & APIs required for interoperability
- Integration of different components of IHIP
- Deployment of IHIP
- Implementation (pilot in two states & five hospitals and then roll out pan-India) and thereafter maintenance of IHIP

The detailing of Scope of Work with deliverables and respective milestones will be done at RFP stage.

10.2 Proponent(s) should provide and maintain the solution in agreement with the following features:

10.2.1 Accessibility

a) A centralized web-based cloud compliant application with a simple and user friendly graphical user interface (GUI) for easy and fast mode of operation and usability. The application should be accessible by any Healthcare Service Provider organizations (both public and private), healthcare professionals, government and citizens via laptop, desktop, mobile applications on wired or wireless connectivity.

Note: *A comprehensive solution document consisting of the technical architecture solution for handling connectivity scenario, data handling capabilities/data sizing should be corresponded. Offline mode of operation needs to be proposed by the selected proponent.*

b) The IHIP framework will offer interface with various functional modules across different standards compliant Healthcare Management Information Systems hosted by third parties on IHIP. The various modules of healthcare management information system as offered by third parties & hosted on IHIP would include EHR related modules. An indicative list of such modules is given as below (the list is non-exhaustive):

- Out Patient Department (OPD) Module
- Admit Discharge and Transfer (ADT) Module
- In Patient Department (IPD) Module
- Emergency module
- Laboratory Information System (LIS) Module
- Radiology Information System (RIS) Module
- E-Prescription Module
- Telehealth Module
- External Application Module (wearable device and mobile application interface)

Note: *The above is non-exhaustive.*

IHIP would also require to ensure interface/data exchange (through middleware as needed) with HISs, which are not EHR Standards compliant, in order to ensure continuity of health records.

c) Our vision is to assign Unique Health Identifier (UHID) to individuals- proposed to be linked with the ADHAAR number and personal mobile number- and unique identifier for Healthcare Providers/Professionals. Additionally, other GoI issued identification numbers such as EPIC / Voter ID, Driving License, PAN, Passport, Ration Card etc. should also be linked for unique identification of the citizen for facilitating de-duplication of the assigned UHID to identify duplicate records for the same patient. The UHID number should also have an option of linkage with alternate ID's issued from various health facilities along with National Identification Number (NIN) assigned to Healthcare service providers (both public and private) of India.

d) Online account access via citizen portal hosted on NHP as part of IHIP application, for every citizen through which the past medical history/health record could be viewed, edited (except deletion) and uploaded by the citizens themselves in EHRs. Additionally, the portal should be capable of capturing patient/citizen's health data from various wearable devices and mobile application(s).

Note: *Users would not be allowed to perform Delete operations across the IHIP application. However, archival of the data would be permissible.*

e) Generation of analytics dashboards and reports via analytics tools for different types of

analytics using anonymized health data in order to facilitate effective policy-making decisions for public health at national level etc.

10.2.2 Interoperability

a) Platform architecture should be open, flexible and dynamic in nature with easy application programming interface (API) communication with other health information sources including HIS of various hospitals, laboratories, physician clinics, Emergency Ambulance services, AYUSH, MCTS, NIKSHAY-TB, IDSP, CGHS, and other third party EHR application(s) permitted to be hosted on IHIP only after due process of evaluation and approval of CHI or MoHFW.

Note: *The selected proponent would be expected to understand and identify the interface requirements including an API toolkit for integration between the existing as well as proposed solution.*

b) Generation of standards compliant Electronic Health Record (EHR) for every citizen. The application should perform real-time collection and aggregation of patient specific clinical data trapped in multiple silos from various sources including EMR modules of HIS systems at hospitals, individual physicians and other health professionals in order to improve quality of care by reducing duplication and manual transmission of data across different stakeholders/providers/hospitals.

c) A centralized storage layer, as required, of Health Information Exchange (HIE) for storing the heavy image data records (like X rays, CT scan, MRI, ECG, and Angioplasty) and consequently generating a link/metadata of the image data records for the health institutions in order to access these records. The health institutions may have local storage of such data for a given period of time in addition to the centralized HIE storage of the heavy image data records. In cases of patients getting referred to another hospital, the data captured from the hospital referred would be available in HIE storage layer.

d) Generation of timely alerts and notifications via Emails, Voice and SMS to all stakeholders. SMS Gateway should support both “Push and Pull” services.

e) Enterprise class master data management software, which will help to create a unique/ true copy of data removing all de-duplication of patient specific clinical / non-clinical health data from the database in order to enable ease of data warehousing and data management.

10.2.3 Scalability

The design & development and demonstration of the IHIP with concurrent adoption in pilot locations (two states & 5 hospitals) is envisaged over 7 months timeframe. After 3 months from start of the design & development of IHIP, the solution should be substantially ready for demonstration. After successful pilot, IHIP will be rolled across remaining States/UTs over the period of next 4 years. The system architecture should be capable for large scale adoption and an optimal approach for progressive nationwide roll-out.

Note: *The design of the application should allow easy addition of new functionality or features with minimal changes to the existing application.*

10.2.4 Security

The system developed should have adequate level of data privacy, cloud portability, and secure interoperability of data, when stored or retrieved or transmitted across the Health IT systems.

10.2.5 Audit Log

Maintenance of audit trail which would be a detailed record showing all the user-defined events of the application and the transactions / operations performed by the concerned user during a given period of time. Audit log must display the following details, but not limited to, with filter /sorting criteria options: (the list is non-exhaustive)

- Patient ID and User Name
- Module – Sub Module – Screen – Section – Field Name
- Date and Timestamp
- Updated Value

 Activity Performed

Note: *The audit log should be updated as per the mandated rule/law by GoI at any time.*

10.2.6 Response Center

A 24x7 support center for feedbacks, grievances (for both patients and users), technical or operational support. The response center would serve as a single point of contact for all ICT related incidents, service requests, feedbacks as well as suggestions. A ticket number would be issued against the logged complaint, incident, and grievances with the appropriate severity level and timely escalations to the concerned stakeholders. The bidder should propose an integrated CRM system to handle case management and also provide help to users using innovative technologies like chat, co-browse functionalities.

10.2.7 Standardization

a) The IHIP application should comply with the EHR Standards for India. Few of the standards are mentioned below (the list is non-exhaustive):

i. Medical Image and Scanned Records Standards: NEMA DICOM PS3.0, PACS and Documentary data (scan for prescriptions, summaries etc.)

ii. HL 7: To be used for exchange and seamless handling of inbound and outbound HL7 messages from any system that has similar capabilities; v2.x (V2) or v3.x (V3) or above. The proposed IHIP application would be adaptable for intermediate implementation of HL7 FHIR (whenever required).

iii. Laboratory observations Standards: LOINC coding standards

iv. WHO-FIC Standards: The WHO Family of International Classification (WHO-FIC) standards primarily used for aggregated information and statistical/epidemiological analysis reporting, for regulatory purposes as mandated by the health regulatory, intelligence, and various research bodies.

v. Clinical Healthcare Terminology Standards: SNOMED-CT coding is used to capture problem list, allergies, diagnosis, procedures etc. primarily used for clinical analytics and clinical decision support systems.

vi. WHO International Terminologies on Traditional Medicine Standards: For Ayurveda, Yoga, Unani, Siddha, Homeopathy systems of medicine (whenever notified).

Note: *Apart from above, the selected proponent needs to follow all the international and national industry standards.*

b) The proposed IHIP application would be based on the standards for Patient Identification such as MDDS for demographics, MDDS for health domain (whenever notified); Open Source solutions such as Open API, openEHR (whenever notified), Open Standards policy; Guidelines for Indian Government Websites (GIGW); and other relevant e-governance guidelines as per the norms suggested by DeitY, MCIT, Government of India.

11. TIMELINE

Design, Development & Demonstration of IHIP	T0+ 4 Months = (T1)
Pilot of IHIP in two States & 5 Hospitals	T1+ 3 Months = (T2)
Roll out of IHIP pan India	T2+ 48 Months

Part III: Terms of Reference (ToR) and Pre-Qualification Criteria

12. TERMS AND CONDITIONS UNDER WHICH THIS REOI IS ISSUED

a) This REOI is not an offer and is issued with no commitment. CHI reserves the right to withdraw the REOI and change or vary any part thereof at any stage. CHI also reserves the right to disqualify any proponent, should it be so necessary at any stage.

b) CHI reserves the right to withdraw this REOI if CHI determines that such action is in the best interest of the GoI.

c) Timing and sequence of events resulting from this REOI shall ultimately be determined by CHI.

d) No oral conversations or agreements with any official, agent, or employee of CHI shall affect or modify any terms of this REOI and any alleged oral agreement or arrangement made by a proponent with any department, agency, official or employee of CHI shall be superseded by the definitive agreement that results from this REOI process. Oral communications by CHI to proponents shall not be considered binding on CHI, nor shall any written materials provided by any person other than CHI.

e) Neither the proponent nor any of the proponent's representatives shall have any claims whatsoever against CHI or any of their respective officials, agents, or employees arising out of, or relating to this REOI or these procedures.

f) Proponents who are found to canvass, influence or attempt to influence in any manner the qualification or selection process, including without limitation, by offering bribes or other illegal gratification, shall be disqualified from the process at any stage.

g) Each applicant shall submit only one Pre-qualification requirement.

13. RIGHTS TO THE CONTENT OF THE EOI

For all the EOIs received before the last date and time of submission, the EOIs and accompanying documentation of the Pre-Qualification will become the property of CHI and will not be returned after opening of the EOI. CHI is not restricted in its rights to use or disclose any or all of the information contained in the EOI and can do so without compensation to the proponents. CHI shall not be bound by any language in the EOI indicating the confidentiality of the EOI or any other restriction on its use or disclosure.

14. ACKNOWLEDGEMENT OF UNDERSTANDING OF TERMS

By submitting an EOI, each proponent shall be deemed to acknowledge that it has carefully read all sections of this REOI, including all forms, schedules and forms hereto, and has fully informed itself as to all existing conditions and limitations.

15. EVALUATION OF PRE QUALIFICATION CRITERIA

The proponents' Pre-Qualification in the EOI document will be evaluated against the pre-qualification criteria specified in the REOI document. The proponents are required to submit all the supporting documentation as per the pre-qualification criteria specified (e.g. detailed project citations and completion certificates, client contact information for verification, profiles of project resources and all others) as required for evaluation.

16. LANGUAGE OF EOI

The EOI and all correspondence and documents shall be written in English.

17. PRE-QUALIFICATION CRITERIA

17.1 The proponent should be competent enough to be able to develop, manage and operate IHIP at State Level, Regional Level and Central Level HUBs of health facilities/centers by deploying appropriate technical manpower as per expected services.

17.2 Proponent should have the experience in implementing integrated health information application software conforming to Interoperability and Open Standards. In case the proponent offers off the shelf product, the proponent has to customize the software as per the need of CHI to ensure interoperability at National level.

17.3 Proponent may compete as a single entity or in a consortium. However, consortium should not include more than 3 members.

17.4 The selected proponent will be responsible to set up the integrated health information application infrastructure as per broader architecture and scope indicated in the REOI.

17.5 For selection, the proponent should meet all the criteria (no. 1 to 8) as outlined in the table below.

S. No	Criteria Required	Document
1	The Company / Consortium Members (in case of consortium) should be an entity registered in India under the Company Act, 1956 (or) a firm registered under the Limited Liability Partnership Act, 2008 (or) a firm registered under the Partnership Act, 1932 for last 5 years as on 31st March, 2016, and must have a registered office in India which should be in operation as on 31st March, 2016 In case of a consortium, the Lead Proponent would need to submit an agreement with the other	Certificates of Incorporation Consortium Agreement

S. No	Criteria Required	Document
	members of consortium for the contract clearly indicating the division of work and their relationship.	
2	The Proponent (Company/Consortium) must have a proven capability in design, development, integration, implementation, operations and maintenance of "Live" HIE systems and Healthcare Solutions (i.e. HIS, EMR, EHR) across large hospitals/healthcare facilities or networks of hospitals/healthcare facilities and should be handling/managing database of atleast 1,00,000 unique patient records (in format as per the EHR Standards and being compatible for aggregation, semantic interoperability etc.) as on date of submission of EOI. The HIE System should be for exchange between two or more disparate databases (HIS) of hospitals/networks of hospitals and should be capable of high volume exchange of data, image etc. For HIE capability purposes, application for exchange of data/records only within a network/chain/group of associated hospitals/ healthcare service providers or on a single database shall not be considered.	Satisfactory Completion of Works Certificates from the client(s) confirming the year of work, scope of work and work order details; **OR** Work Order + Phase Completion Certificate from the client(s) for the ongoing "Live" projects with their scope of work
3	The Company/Lead Proponent (in case of Consortium) must have executed a single project of total value atleast Rs.30 Crore (excluding hardware) in design, development, integration, implementation, operations and maintenance of HIE or Healthcare Solutions (i.e. HIS, EMR, EHR) in last five years.	

S. No	Criteria Required	Document
4	The Company / Lead Proponent of consortium should have Positive Net Worth as on 31st March 2016	Audited and Certified Balance Sheet of last 3 Financial Years (2013-14; 2014 – 15; 2015 – 16) **AND** Certificate from Chartered Accountant and Authorized Signatory
5	Average annual turnover of the Company/ Lead Proponent of consortium during the last three financial years 2013-14, 2014-15, 2015-16 from below mentioned Health-IT business streams (excluding turnover from hardware) should be at least Rs.30 Crore (as per the published Income Statement): □ Health Information Exchange System □ Hospital/Healthcare Management Information System □ IT enabled systems covering data integration, data warehousing and data management. In case of consortium, average annual turnover of each of the non-lead members during the last three financial years 2013-14, 2014-15, 2015-16 from the above mentioned Health-IT business streams (excluding turnover from hardware) should be at least Rs.10 Crore (as per the published Income Statement). In case of calendar year, 3 years up to December 2015 would be taken in to account	Certificate from statutory auditor appointed by the company (of last 3 Financial Years (2013-14; 2014 – 15; 2015 – 16)
6	The Company / Consortium Members should have a	□ Copy of Service Tax Registration

S. No	Criteria Required	Document
	valid Service Tax Registration and Income Tax returns and PAN card	□ Income Tax returns for last 3 financial years (till 2015-16) □ Audit report from CA for last 3 financial years (till 2015-16) □ Copy of PAN card
7	The Company / Consortium Members should not be under a declaration of ineligibility for corrupt and fraudulent practices issued by any of the Central or State Government Ministries / Departments, and should not have violated / infringed upon any Indian or foreign trademark, patent, registered design or other intellectual property rights	Undertaking (Self Certification) on company letter head certified by authorized signatory.
8	The Company/ Consortium Members should be a CMMI Level 5 certified.	Copy of the certificate from authorized certifying agency. The certificate should be valid as on 31st March 2016.

18. RESPONSE REQUIREMENTS

18.1 The Response to the Pre-Qualification Requirements shall be prepared in accordance with the requirements specified in this REOI and in the format prescribed in this document for each of the above mentioned qualifying criteria as proof of having the minimum requirements. EOI must be direct, concise, and complete. All information not directly relevant to this REOI should be omitted.

18.2 The EOI shall be sealed and super scribed “Response to Pre-Qualification Requirements – Design, Development, Integration, Deployment, Implementation and Maintenance of Integrated Health Information Platform (IHIP)” on the top right hand corner and addressed to CHI at the address specified in this document.

18.3 The EOI should be submitted with two printed copies of the entire EOI, one marked ORIGINAL and the second one as DUPLICATE and a soft copy on non-rewriteable compact discs (CDs) with all the contents of the pre-qualification REOI. The words "Response to Pre-Qualification Requirements – Design, Development, Integration, Deployment, Implementation and Maintenance of Integrated Health Information Platform (IHIP)" shall be written in indelible ink on the CD. The Hard Copy shall be signed by the authorized signatory on all the pages before being put along with the CD in the envelope and sealed.

18.4 In case of discrepancies between the information in the printed version and the contents of the CDs, the printed version of the pre-qualification EOI will prevail and will be considered as the EOI for the purpose of evaluation.

18.5 The EOI should contain the copies of references and other documents as specified in the REOI. A technical write-up or proof of concept should be included in the envelop.

18.6 A board resolution authorizing the signatory of EOI to sign as a binding document and also to execute all relevant agreements forming part of EOI should be included in the envelop.

18.7 CHI will not accept delivery of EOI in any manner other than that specified in this REOI. EOI delivered in any other manner shall be treated as defective, invalid and rejected.

19. PRE-QUALIFICATION REQUIREMENTS

19.1 The EOI should be submitted in the sealed envelope with the following details. Proponents are requested to submit their responses for the Pre- Qualification Requirements in 3 parts, clearly labelled according to the following categories:

i. **Part I – Covering Letter, Processing Fee, and Board Resolution/Power of Attorney**

a) Covering Letter from the Proponent as per the format provided in Form I.

b) A non-refundable processing fee of Rs. 5,000 (Rupees Five Thousand only) in the form of a demand draft should be included in the envelop.

c) A board resolution authorizing the signatory of EOI to sign as a binding document and also to execute all relevant agreements forming part of EOI should be included in the envelop.

ii. Part II – Details of the Organization

a) This part must include a general background of the respondent organization along with other details of the organization as per the format provided in the REOI (Form II). Enclose the mandatory supporting documents listed in format.

b) The proponent must also provide the financial details of the organization as per format provided in the REOI (Form III). Enclose the mandatory supporting documents listed in format.

iii. Part III – Similar Project Experience

Respondents must provide details (client organization, nature / scope of the project, project value) of IT enabled healthcare project experience in line with the pre-qualification criteria outlined as above, as per the format provided in the REOI (Form IV). The projects mentioned here should match with the projects quoted by the respondent in order to satisfy the qualification requirements. Enclose the mandatory supporting documents listed in format.

Part IV: Response Formats

FORM I: COVERING LETTER

[On Company Letterhead]
[Location, Date]

To:
Prof. Suptendra Nath Sarbadhikari
The Project Director
Centre for Health Informatics
National Institute of Health and Family Welfare
Baba Gang Nath Marg,
Munirka
New Delhi 110067

Subject: Expression of Interest for the Integrated Health Information Platform (IHIP).

Dear Sir,

We, the undersigned, offer to provide the Design, Development, Implementation, Integration, Deployment and Maintenance of "Integrated Health Information Platform (IHIP)" in accordance with your Request for Expression of Interest dated [__/__/2016] and our response.

2. Primary and Secondary contacts for our company are:

	Primary Contact	Secondary Contact
Name:		
Title:		
Company Name:		
Address		
Phone:		
Mobile:		
Fax:		

3. We are hereby submitting our Expression of Interest (EOI) in both printed format and as a soft copy in a CD. We understand you are not bound to accept any EOI you receive.

4. We confirm that the information contained in this response or any part thereof, including its exhibits, and other documents and instruments delivered or to be delivered to CHI is true, accurate, verifiable and complete. This response includes all information necessary to ensure that the statements therein do not in whole or in part mislead the department in its short-listing process.

5. We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the short-listing process or unduly favour our company in the short-listing process, we are liable to be dismissed from the selection process or termination of the contract during the project, if selected to do so, for undertaking the work to design, develop, implement, and system integration testing and commissioning (SITC), operations and maintenance for the nation level rollout of the IHIP Project.

6. We agree to abide by the conditions set forth in this REOI.

7. It is hereby confirmed that

I/We are entitled to act on behalf of our corporation/company/ firm/organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Dated this, Day of, 2016

(Signature) (In the capacity of)

Duly authorized to sign the REOI Response for and on behalf of: Sincerely,

[Name]

[Title Signature Date]

(Name and Address of Company) Seal/Stamp of the Company(s) / Lead Proponent

CERTIFICATE AS TO AUTHORISED SIGNATORIES

I, ……, certify that I am …… of……,and that…… who has signed the above response is authorized to bind the corporation by authority of its governing body.

[Date]

(Name and Address of Company) Seal/Stamp of the Company(s) / Lead Proponent

FORM II: GENERAL DETAILS OF THE ORGANISATION

Details of the Organization	
Name of organization	
Nature of the legal status in India	
Legal status reference details	
Nature of business in India	
Date of Incorporation	
Date of Commencement of Business	
Address of the Headquarters	
Address of the Registered Office in India	
Other Relevant Information	

Mandatory Supporting Documents:

a) Certificate of Incorporation from Registrar Of Companies (ROC)

b) A certificate from the Chartered Account must be attached as a proof of annual turnover of the Company/Consortium Members for last 3 financial years (till FY2015-16).

c) A certificate from the Chartered Account must be attached as a proof of positive Net Worth as on 31st March 2016

d) Undertaking (Self Certification) that the Company(s) / Members of consortium has never been engaged themselves in any corrupt and fraudulent practices and has never been blacklisted by any Central /State Government Departments.

e) Company(s) / Members of consortium should not have violated / infringed upon any Indian or foreign trademark, patent, registered design or other intellectual property rights. A self-certificate should be provided by the proponent.

FORM III: FINANCIAL DETAILS OF THE ORGANIZATION

Financial Information			
	FY 2013-14	**FY 2014-15**	**FY 2015-16**
Revenue (in INR crores) from Health-IT businesses (excluding turnover from hardware) from the following three business streams: □ Health Information Exchange System □ Hospital/Healthcare Management Information System □ IT enabled systems covering data integration, data warehousing and data management.			
Profit Before Interest, Tax, Depreciation & Amortization (in INR crores)			
Any Other Relevant Information			
Mandatory Supporting Documents: Audited and Certified Balance Sheet of last 3 Financial Years (2013-14; 2014 – 15; 2015 – 16) must be attached. The Net worth of the company should be positive as on 31/03/2016.			

FORM IV: SIMILAR PROJECT EXPERIENCE

Project Experience	
General Information	
Name of the project	
Client for which the project was executed	
Name and contact details of the client	
Current Status	
Project Details	
Description of the project	
Geographical Scope	
Outcomes of the Project	
Applications	
Technologies Used	
Infrastructure	
Operations and Services	
Number of Locations / Sites	
Other Details	
Duration of Implementation (post selection)	
Total Duration of the project (no. of months, start date, completion date)	
Total cost of the project	
Total cost of the services provided by the Proponent	
Other Relevant Information	
Mandatory Supporting Documents: a. Work Orders / Client Certificate (including the cost details of the project excluding hardware components) confirming year and domain of activity should be attached. Supporting documents for cost of project undertaken to be provided. In case of foreign currency projects, the project value should be shown in INR as per the conversion rate prevailing at the time of award of the work order. b. The Company(s) / Lead Proponent should produce the "satisfactory completion of works certificate" from the clients in reference to the works they have cited.	

c. Complete details of the scope of the project should be provided to indicate the relevance to the prequalification criterion (which is part of minimum qualification criteria).

FORM V: QUERY FORM

S. No.	Part/ Section/ Item No of REOI	Clarifications Requested	Remarks

Annexure – I

Integrated Health Information Platform (IHIP)

Introduction

This Concept Note outlines objectives, components along with high level architecture, business model, implementation framework, cost elements and estimate etc. for the proposed Integrated Health Information Platform (IHIP). It has been prepared based on DPR of Health MMP, discussions held in meeting of Steering Committee on eHealth, deliberations held with MoHFW's officials/ DeitY/Experts/ Solution Vendors etc., and review of select relevant documents available through desk research.

Background

During the last two years, a detailed exercise had been undertaken for scoping and preparation of project report for comprehensive adoption of ICT in Indian healthcare under Health Mission Mode Project (MMP)-aligned with Digital India Programme and E-Kranti (NeGP 2.0). It emphasized primarily upon the need for integration of and interoperability amongst various Health IT systems and creation of electronic health records (EHRs) of citizens along with pan-India exchange.

Creation of EHRs of citizens and establishment of supporting infrastructure/ mechanism for exchange of health records emerges as one of the key focus areas under the plan for comprehensive use of ICT in healthcare. Accordingly, in the meeting of Steering Committee on eHealth held on 27th July, 2015, it was deliberated and decided to establish an 'Integrated Health Information Platform' primarily focusing on interoperable EHRs and subsequently to encompass other key components of eHealth, as feasible, like Drug Supply Chain Management, Citizen Portal etc., as underlined in Health MMP DPR.

Issues to be addressed

It has been observed those healthcare organizations are mostly operating in data-rich but information-poor environment. Patient health data is being gathered / stored - distributed over a number of locations and via a number of IT solutions - which is generally inaccessible, improperly formatted/not standardized and hence not interoperable. System interoperability along with supportive IT frameworks and optimal information exchange to support better healthcare services and thus outcomes is the key requirement in the prevailing scenario. Also need is there for transforming data into information and evidence, which could help in decision support systems (DSSs).

Multiple data sources need to be integrated in meaningful ways to improve services in relation to access, quality, user satisfaction and efficiency. With information sharing, volumes of independent sets of data across multiple systems can be brought together in integrated, relevant and useful summary views. Integrated data can be de-identified and aggregated in such a way to enable policy-making decisions at public health level. The current focus is more on "pushing" vs "pulling" data, which often leads to ineffective data sharing and impedes care quality and efficiency impacting outcomes.

Key issues need to be addressed
Fragmented information streams/systems
Quality of data
Large volume of data collected
Duplication of data collection – *Data Redundancy*
Sub-optimal resource utilisation due to duplicate information systems
Lack of interoperability and accessibility of information
Lack of unique identifiers for patients, providers and health facilities
'Push' vs. 'Pull' model of data sharing
No common EHR system

It is essential that information can be accessed from anywhere in the health system to facilitate seamless communication in between different stakeholders like patient-to-provider, provider-to-provider, provider-to-health managers/government agencies, government/provider-to-academia etc. Data should only be recorded once, at its source

(single instance capture), the systems need to be sustainable, data must be standardized and understandable and the system needs to be available locally

Objectives of IHIP and Outcome envisaged

The overall and ultimate purpose of setting up IHIP is to facilitate better health services to citizens, improve efficiency for healthcare services and health programmes by optimum utilization of resources, availability of information/data – in secure manner and on real time

The specific objectives envisaged to be achieved through IHIP include:

- To leverage information and communication technologies (ICTs), aligned with health care goals under Digital India Programme and E-Kranti, meeting the requirements of different stake-holder groups- citizens, providers, policy makers and program managers

- To set-up a health information technology platform hosted on Cloud which has integrated and inter-operable standards compliant and open source healthcare management applications along with infrastructure/services for health information highway

- To enable real time collection and aggregation of data in an efficient and effective manner and to facilitate exchange of data across systems and stake-holders by establishing a framework for unique identification for patients, providers/health facilities and medical procedures.

- To facilitate improvement in quality/continuity and affordability of care through interoperable EHRs and better utilization of resources

- To enable effective and efficient management of population health through real time aggregated data

The key outcomes/benefits envisaged from IHIP for different stake-holder groups include:

Stakeholder group	Outcome/ benefits
Citizen / Patient	• Continuity of care • Confidential and secure health data/records management • Better affordability-by avoiding redundant examination/ tests/procedures
Healthcare Providers	• Availability of real time and standardised data/information • Optimal information exchange to support better health outcome • Better decision support system • Fewer redundancies and medical errors
Payers	• Better and smoother management of billing and claims processes • Enhanced precision and speed of coverage payments to healthcare service • Better analysis of cost-effectiveness of coverage policies • Business intelligence and more sophisticated data analysis towards better coverage policies planning etc.
Government/ Health Managers	• Reduced duplication of data (single instance capture) - low data redundancy • Less fragmentation and more standardisation health information systems • Strengthening of evidence base for effective policies • Big data analytics – Dashboards for Monitoring and Evaluations facilitating effective decision making

Components and Architecture

The various design aspects – in line with the prevailing challenges - considered while conceptualizing IHIP include the following:

Integration of multiple systems – primarily patient centric- working in silos
Data capturing at source in digital format
Sharing and aggregation of quality data with minimum latency across applications and stake-holders
Availability of uniquely identifiable, easily traceable and verifiable data/records in the system
Access to quality data to health managers, policy makers etc. capturing various parameters linked with determinants of health for effective and efficient healthcare delivery

In line with the envisaged objectives, IHIP is proposed to encompass various components grouped as **eHealth applications -** describing tools and systems that will be used by users to interact with the system or for data processing; **eHealth data -** describing major data items and data that will be shared between components; and **eHealth infrastructure**: describing computing infrastructure required to support eHealth solutions.

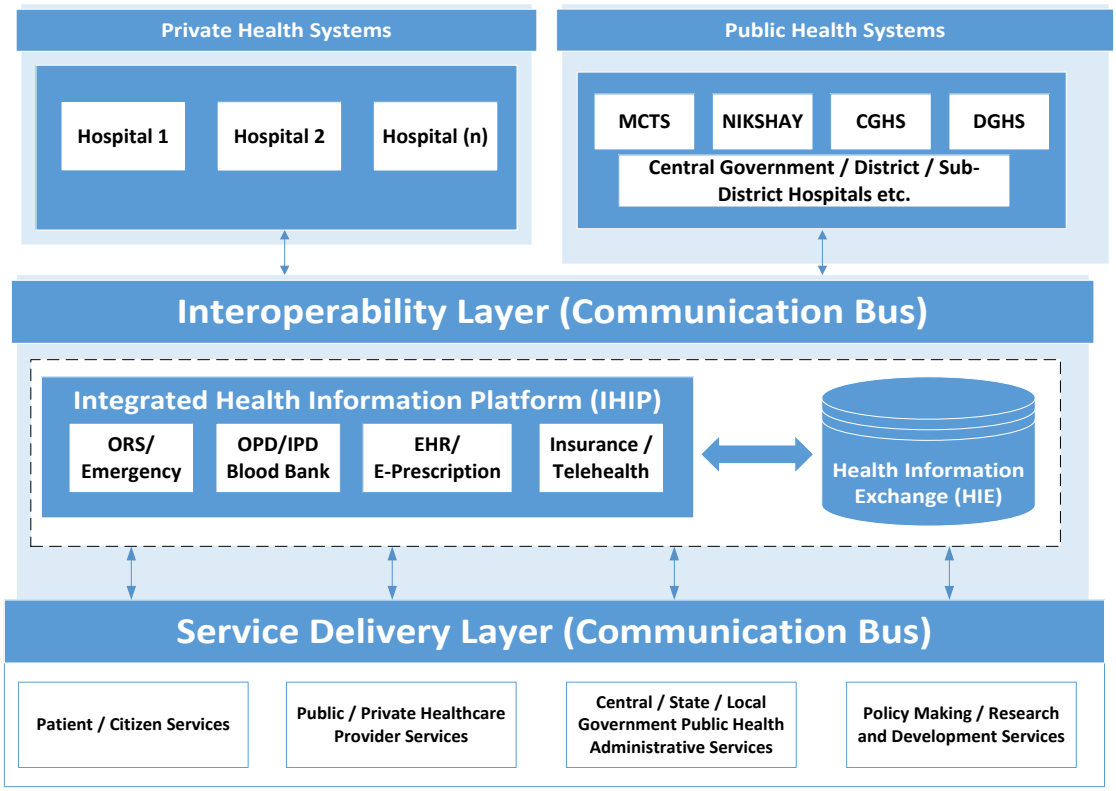
Category	Brief
eHealth applications	
Application / Solution	• To meet various requirements related to creation of EHR through 'suite for digital health records creation and management' consisting of[1]: o Hospital information management/ Clinical administration/Electronic medical records o Remote patient monitoring – through internet-of-things; wearable devices, M2M technologies etc. o Telehealth

[1] Given on illustrative basis; suite may include all or some

Category	Brief
	○ E-commerce- billing, payment, insurance claims etc. ○ Patient communications – SMS, emails, voice ○ Business intelligence and Analytics ○ Etc. For eHealth applications on IHIP, tried and tested open source solutions offered by third parties (both public and private IT vendors) and complying with EHR Standards (notified by MoHFW in 2013) and other eGovernance Standards (notified by Department of Electronics & Information Technology-DeitY) would be hosted on IHIP. Various developers including innovative start-ups can host their standards compliant applications/solution-suites on IHIP after due process of evaluation by the Ministry. Users can use the applications taking a 'Cafeteria Approach' i.e. to choose application from available options as per their need on 'pay for use' basis. • Also to include Public Health Applications/Systems having interface with patient/citizen health records –those related to disease control/immunisation like Mother and Child Tracking System , TB Control Pogramme etc.
Information Exchange	• To facilitate exchange of information between different EMR systems • To connect to a database in which the medical records of the patients are collected from multiple providers and consolidated together • Exchange between patients, healthcare providers, payers, medical data providers
eHealth infrastructure	
Hosting environment and Database management	• Hosting of servers -application, database- on 'Cloud' • User of IHIP doesn't need to own servers/ storage/database

Category	Brief
Standards	• Compliance of applications to EHR Standards, Open Source Software Policy, Open API Policy, other relevant eGovernance Standards
Privacy and Security	• Patient consent/ permissions • Disclosure management
eHealth data	
Registry / Identifiers	• Unique identifiers for patients, providers, health facilities
Repositories	• Health records

A conceptual diagram representing the fundamental organization of IHIP's components, their logical relation to each other/other systems and their inter-dependencies has been outlined and presented as below. These components need to interact amongst themselves according to a certain plan or design.



CONCEPTUAL DIAGRAM OF IHIP

Annexure – II

National Identification Number (NIN)

Overview

In view of the key challenge highlighted in Health MMP DPR that health information and patient records with different Health IT systems remain trapped in silos (having virtually no inter-operability) in absence of a common identifier in the different databases, detailed discussions were held with different divisions, states and NIC. After detailed discussions and consultation, it has been decided to generate and assign unique number i.e. National Identification Number (NIN) to each of the health facilities (both public and private) in order to facilitate interoperability and information exchange between different IT systems. It is also critical for creation of electronic health records of citizens.

National Identification Number (NIN):

National Identification Number (NIN) for Health facilities of India is a random 10-digit number generated for each facility and will be unique within India. NIN is generated on the basis of LUHN algorithm where the last digit is the checksum and the rest nine digits are the random number generated. In order to identify the geographic location of the health facility attributes like state, district, taluka, village based on MDDS (Meta Data and Data Standards) codes will be attached to NIN. The Process of the generation of NIN number has been initiated by Centre for Health Informatics (CHI) in collaboration with NIC (NIC has provided basic software for NIN generation). The further development will be done by CHI as per needs and future requirements. The National Identification Number (NIN) would be in compliance with the MDDS[2] for Health domain as notified by DeitY.

Definition of the Health Facilities to be covered:

Health Facility means all Government, Private including allopathic, Ayurveda, Homeopathy, Sidha, Unani, Yoga Hospitals, clinics, diagnostic laboratories, blood banks etc.

[2]NIN will follow Metadata and Data Standards (MDDS) for semantic interoperability, when MDDS for Health Domain is notified. It will adopt Demographics MDDS, notified by DeitY, as relevant.

Structure of NIN:

- It is 10 Digit Unique Number given to each Health Facility.
- 9 digits are random number followed by 1 digit check-sum number
- First digit is never 0

Action Plan for NIN generation, Validation and Adoption:

S. No.	Action Items
1.	Verification of data related to Health Facilities from different sources.
2.	Allocation of National Identity Number (NIN) to each Health Facility of India (HFI)
3.	All ICT Systems in Health Sector (Central, State, Private) to use NIN prospectively in new systems in order to achieve interoperability and seamless information exchange
4.	States /UTs to take necessary steps to incorporate NIN in their existing systems
5.	Integration with Clinical Establishment Registration and Regulation System (CERRS).

Receipt No : 346613/2016/E-GOV

File No. Q-11013/4/2016-eGov
Government of India / भारत सरकार
D/o Health and Family Welfare/ स्वास्थ्य एवं परिवार कल्याण विभाग
e-Governance Section /(ई गवर्नेंस अनुभाग)
*****

निर्माण भवन, नई दिल्ली
दिनांक: 23 अगस्त, 2016

Office Memorandum

Subject: **Constitution of Technical Evaluation Committee (TEC) for setting-up of Integrated Health Information Platform (IHIP).**

Ministry of Health and Family Welfare has proposed to set-up the Integrated Health Information Platform (IHIP) and selection of the service provider for Health IT solutions by publishing the Request for Expression of Interest (REoI) document. Centre for Health Informatics (CHI) setup by MoHFW has been mandated to administer the development and implementation of IHIP.

2. The undersigned is directed to convey the approval of competent authority to the setting up of Technical Evaluation Committee for setting up of IHIP. The finding and the recommendation of the TEC will help in effective steering, reviewing and implementation of Integrated Health Information Platform (IHIP). The composition and terms of reference of the Technical Evaluation Committee (TEC) are as under:

Composition of the Technical Evaluation Committee (TEC) on setting up of IHIP

1.	Sh. Sunil Sharma, JS(eGov), MoHFW	**Chairman**
2.	Dr. Deepak Agarwal, Additional Professor (Neurosurgery) Chairman Computerization, AIIMS	Member
3.	Dr. C. Jayan, Joint Director, e-Health, Kerala	Member
4.	Sh. Vinay Thakur, Director, NeGD, DeitY	Member
5.	An Expert on Big Data Analytics	Member
6.	An ICT expert from IIT/NIT/regional engineering institutes/ Management institutes of prominence.	Member
7.	Shri Gaur Sunder, PTO, C-DAC, Pune	Member
8.	Prof. S N Sarbadhikari, Project Director, CHI, NIHFW	Member
9.	Shri S.K. Sinha, STD, NIC, MoHFW	Member
10.	Shri Ankit Tripathi, Additional Director, CHI, NIHFW	Member
11.	Shri Jitendra Arora, Director (e-Gov), MoHFW	**Member Convener**

Terms of Reference of the Technical Evaluation Committee (TEC)

1) Review, evaluate and finalize the REOI and RFP documents.
2) Technical review of the eligibility of participating agencies and short listing of eligible agencies to whom RFP document would be issued.
3) Participate in the pre-bid meeting and clarify queries and observations of the agencies.
4) Laying down criteria for technical evaluation of the bids/proposals (in line with the Detail Project Report (DPR) of Health MMP approved by MoHFW).
5) Evaluation of the bids/proposals received in line with the technical evaluation criteria approved.
6) TA/DA to the non-officials members will be governed as per the norms laid down by Government of India.

जितेन्द्र अरोड़ा

(जितेंद्र अरोड़ा)
निदेशक (ई गवर्नेंस)
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
फोन : 23062317

To:

The Chairman and all members of TEC

Copy to:

1. **PS to Secretary (HFW), MoHFW**
2. **PS to AS (KBA), MoHFW**

JITENDRA ARORA
Director
Tel. : 011-23062317
E-mail : dir.eheatlh@gmail.com

सत्यमेव जयते

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
डी-307, निर्माण भवन, नई दिल्ली - 1100
Government of India
Ministry of Health & Family Welfare
307-D, Nirman Bhavan, New Delhi-1100

No: Q-11013/4/2016-eGov
Dated: 06.09.2016

To,

The Secretary,
Department of Science and Technology,
Technology Bhavan, New Mehrauli Road,
New Delhi-110016

Subject: **Technical Evaluation Committee (TEC) for setting-up of Integrated Health Information Platform (IHIP) - Nomination of an expert.**

Sir,

One of the envisaged goal of Health Mission Mode Project (under E-Kranti & Digital India) of Government of India (GoI) was to establish a pan-India Integrated Health Information System, meeting the needs of various stakeholder groups; and setting up Electronic Health Records (EHR) system including Health Information Exchanges (for sharing of health records across states and health care providers).

2. In this regard, a scheme of **"setting up an Integrated Health Information Platform (IHIP)"** for achieving the **Interoperable Electronic Health Record** of every citizen. The purpose of setting up IHIP is to facilitate better health services to citizens, improve efficiency for healthcare services and health programmes by optimum utilisation of resources, availability of information / data – in secure manner, and on real time basis- through integration of systems to enable the electronic health records (EHRs) of citizens to be made available nationwide with the help of a centralized accessible platform. This would facilitate continuity of care, confidential health data / records management, better affordability, optimal information exchange to support better health outcome, better decision support system, fewer redundancies and medical errors, low data redundancy, big data and predictive analytics etc.

3. Centre for Health Informatics (CHI) setup by MoHFW has been mandated to administer the development and implementation of IHIP through an IT services provider to be selected by an Open Tender process in two stages (EoI & RFP). For this purpose, the Request for Expression of Interest (REoI) has already been published for the selection of the service provider for Health IT solutions (http://www.nhp.gov.in/tender_pg)

4. Technical Evaluation Committee (TEC) has been set up by Ministry of Health and Family Welfare for selection and carry out technical evaluation of the bid **(Copy of order enclosed)**.

5. It is requested that **Dr. K R Murali Mohan, Head, Big Data Initiatives Division** or any other expert dealing with the subject of Big Data Analytics from your organization may kindly be nominated as TEC member.

With regards,

Please issue RRI
by speed post
8-9-16

8 SEP 2016

Yours sincerely
(Jitendra Arora)
Director (eGov)

Copy to:
Dr. K R Murali Mohan, Head, Big Data Initiatives Division

Receipt No : 355933/2016/E-GOV

NATIONAL HEALTH MISSION
राष्ट्रीय स्वास्थ्य मिशन

O/C

सत्यमेव जयते

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
डी-307, निर्माण भवन, नई दिल्ली - 11001
Government of India
Ministry of Health & Family Welfare
307-D, Nirman Bhavan, New Delhi-1100

JITENDRA ARORA
Director
Tel. : 011-23062317
E-mail : dir.eheatlh@gmail.com

No: Q-11013/4/2016-eGov
Dated: 06.09.2016

To,

Dr. M.L Singla, Head,
Department of Business Management & Industrial Administration
Faculty of Management Studies
University of Delhi, Delhi-110007.

Subject: **Technical Evaluation Committee (TEC) for setting-up of Integrated Health Information Platform (IHIP) - Nomination of an expert.**

Sir,

One of the envisaged goal of Health Mission Mode Project (under E-Kranti & Digital India), Government of India (GoI)was to establish a pan-India Integrated Health Information System, meeting the needs of various stakeholder groups; and setting up Electronic Health Records (EHR) system including Health Information Exchanges (for sharing of health records across states and health care providers).

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4. Technical Evaluation Committee (TEC) has been set up by Ministry of Health and Family Welfare for selection and carry out technical evaluation of the bid **(Copy of order enclosed)**.

5. It is requested that your consent regarding nominating you as an Information and Communication Technology (ICT) expert for TEC may please be given.

Best regards,

Please issue RRI by speed post

8-9-16

स्वास्थ्य एवं परिवार कल्याण मंत्रालय जारी किया 08 SEP 2016 ISSUED MINISTRY OF HEALTH

Yours sincerely
(Jitendra Arora)
Director (eGov)

Q-11013/4/2016-eGov
Government of India
Ministry of Health & Family Welfare
(eGovernance Division)
*****

Nirman Bhawan, New Delhi
Dated: 08.09.2016

Meeting Notice

Subject: Proponents' meeting for "Setting up of Integrated Health Information Platform (IHIP)"

A Technical Evaluation Committee (TEC) has been constituted vide OM dated 23rd August, 2016 (Copy enclosed) for selection of service provider for **"Setting up of Integrated Health Information Platform (IHIP)"**.

In this regard, Request for expression of Interest (REoI) for empanelment of agencies for IHIP was published on 24th August, 2016. Queries have been received from various proponents. The compile list of queries is enclosed for your reference.

2. In order to discuss the queries received, a meeting of TEC with proponents is scheduled to be held as per following details:

Date: ***10th September, 2016 (Saturday)***

Venue: ***NDC Conference Hall, NIHFW***

Time: ***10:30 AM to 1:30 PM***

3. Chairman and all Members of TEC are requested to kindly make it convenient to attend the meeting.

(Jitendra Arora)
Director (eGov)

To

1. Sh. Sunil Sharma, JS (eGov), MoHFW
2. Dr. Deepak Agarwal, Additional Professor (Neurosurgery), Chairman Computerization, AIIMS
3. Dr. M.L Singla, Head, Department of Business Management & Industrial Administration
4. Dr. K R Murali Mohan, Head, Big Data Initiatives Division, DST
5. Dr. C. Jayan, Joint Director, e-Health, Kerala
6. Sh. Vinay Thakur, Director, NeGD, DeitY
7. Dr. Amitabha Bagchi, Associate Professor & Data Analytics expert, IIT Delhi
8. Sh. Gaur Sunder, PTO, C-DAC, Pune
9. Prof. S N Sarbadhikari, Project Director, CHI, NIHFW
10. Sh. Ankit Tripathi, Additional Director, CHI, NIHFW
11. Sh. S.K. Sinha, STD, NIC, MoHFW
12. Sh. Jitendra Arora, Director (e-Gov), MoHFW

Receipt No : 356510/2016/E-GOV

स्पीड पोस्ट द्वारा
BY SPEED POST

O/C

Q-11013/4/2016-eGov
Government of India
Ministry of Health & Family Welfare
(eGovernance Division)
*****

Nirman Bhawan, New Delhi.
Dated: 07.09.2016

To,

Project Director (CHI),
(Prof. Supten Sarbadhikari)
National Institute of Health and Family Welfare,
Baba Gang Nath Marg, New Mehrauli Road
Munirka, New Delhi-110067

Subject: **Meeting with vendors to address the queries over REoI publish for IHIP.**

Sir,

This has reference to the Request for Expression of Interest (REOI) document published for selection of the service provider for **"Setting up of Integrated Health Information Platform (IHIP)"**.

2. A meeting with vendors has been scheduled on 10th September, 2016, 11.30 AM at NIHFW, Campus to address the queries raised by vendors.

3. You are requested to make all the necessary arrangements to convene this meeting at NIHFW Campus and expenditure on account of refreshment etc. may booked under GIA related CHI/NHP fund.

Yours faithfully,

(Jitendra Arora)
Director (eGov)
MoHFW

Copy to:
Director, NIHFW

Please issue RRI by speed post
9-9-16

स्वास्थ्य एवं परिवार कल्याण मंत्रालय
जारी किया
9 SEP 2016
ISSUED
ISSUED
MINISTRY OF HEALTH & F.W.

Corrigendum-1

16 September 2016

To

Request for Expression of Interest (REOI)

for "Design, Development, Integration, Deployment, Implementation and Maintenance of

Integrated Health Information Platform (IHIP)

This Corrigendum shall now be a part of REOI issued on 24.08.2016 by Centre for Health Informatics.

(A) The last date of submission of response to REOI is extended till **30.09.2016 and any request for further extension will not be entertained.**

(B) In page no. 20, the table given under Clause 17.5 regarding pre-qualification criteria (no. 1 to 8) to be met by proponent is replaced with the following table :

S. No	Criteria Required	Document
1	The Company / Lead Proponent (in case of consortium) should be an entity registered in India under the Company Act, 1956 (or) a firm registered under the Limited Liability Partnership Act, 2008 (or) a firm registered under the Partnership Act, 1932 for last 5 years as on 31st March, 2016, and must have a registered office in India which should be in operation as on 31st March, 2016. In case of consortium, non-lead members should be registered entity (in/outside India).	Certificates of Incorporation Consortium Agreement In case of a consortium, the Lead Proponent would need to submit an agreement with the other members of consortium (i.e. Consortium Agreement) for the contract clearly indicating the division of work and their relationship. In case of non-lead member(s) of Consortium being registered outside India, all the documents required to be submitted (as mentioned in REOI) for such members should form part of the Consortium Agreement executed and should be duly authenticated by the Lead Proponent of the consortium.
2	The Proponent (Company/Consortium) must have a proven capability in design, development, integration, implementation, operations and maintenance of "Live" HIE systems and Healthcare Solutions (i.e. HIS, EMR, EHR) across large hospitals or networks of hospitals/healthcare facilities and should be handling/managing database of atleast 1,00,000 unique patient records (in format as per the EHR Standards and being compatible for aggregation,	Satisfactory Completion of Works Certificates from the client(s) confirming the year of work, scope of work and work order details; **OR** Work Order + Phase Completion Certificate from the client(s) for the ongoing "Live" projects with their scope of work

S. No	Criteria Required	Document
	semantic interoperability etc.) as on date of submission of EOI. The HIE System should be for exchange between two or more disparate databases (HIS) of hospitals/networks of hospitals and should be capable of high volume exchange of data, image etc. For HIE capability purposes, application for exchange of data/records only within a network/chain/group of associated hospitals/ healthcare service providers or on a single database shall not be considered.	
3	The Company/Lead Proponent (in case of Consortium) must have executed a single project of total value atleast Rs.30 Crore (excluding hardware) in design, development, integration, implementation, operations and maintenance of HIE or Healthcare Solutions (i.e. HIS, EMR, EHR) in last five years.	Work Orders / Client Certificate (including the cost details of the project excluding hardware components) confirming year and domain of activity should be attached. Supporting documents for cost of project undertaken to be provided. In case of foreign currency projects, the project value should be shown in INR as per the conversion rate prevailing at the time of award of the work order.
4	The Company / Lead Proponent of consortium should have Positive Net Worth as on 31st March 2016	Audited and Certified Balance Sheet of last 3 Financial Years (2013-14; 2014 – 15; 2015 – 16) **AND** Certificate from Chartered Accountant and Authorized Signatory
5	Average annual turnover of the Company/ Lead Proponent of consortium during the last three financial years 2013-14, 2014-15, 2015-16 from below mentioned Health-IT business streams (excluding turnover from hardware) should be at least Rs.30 Crore (as per the published Income Statement): ▪ Health Information Exchange System ▪ Hospital/Healthcare Management Information System ▪ IT enabled systems covering data integration, data warehousing and data management.	Certificate from Statutory Auditor/ Chartered Accountant appointed by the company (of last 3 Financial Years (2013-14; 2014 – 15; 2015 – 16) In case of non-lead member(s) of Consortium being registered outside India, the published income statement of such members should be converted to INR as on date of the published income statement.

S. No	Criteria Required	Document
	In case of consortium, average annual turnover of each of the non-lead members during the last three financial years 2013-14, 2014-15, 2015-16 from the above mentioned Health-IT business streams (excluding turnover from hardware) should be at least Rs.5 Crore (as per the published Income Statement).	In case of calendar year, 3 years up to December 2015 would be taken in to account.
6	The Company / Consortium Members should have a valid Service Tax Registration and Income Tax returns and PAN card.	▪ Copy of Service Tax Registration ▪ Income Tax returns for last 3 financial years (till 2015-16) ▪ Statutory Audit report from CA for last 3 financial years (till 2015-16) ▪ Copy of PAN card In case of non-lead member(s) of Consortium being registered outside India, the valid equivalent documents (for Service Tax Registration, Income Tax returns, Income Tax registration) should be submitted.
7	The Company / Consortium Members should not be under a declaration of ineligibility for corrupt and fraudulent practices issued by any of the Central or State Government Ministries / Departments, and should not have violated / infringed upon any Indian or foreign trademark, patent, registered design or other intellectual property rights as on date of submission of response to REOI.	Undertaking (Self Certification) on company letter head certified by authorized signatory.
8	The Company/ Lead Proponent (in case of consortium) should be a CMMI Level 5 certified.	Copy of the certificate from authorized certifying agency. The certificate should be valid as on 31st March 2016.

NB: This is to inform that no further queries/ clarifications will be accepted/ entertained.

End of Document

Receipt No : 370047/2016/E-GOV

Reply to Queries **Date: 16-Sep-2017**

Request for Expression of Interest (REOI) for "Design, Development, Integration, Deployment, Implementation and Maintenance of Integrated Health Information Platform (IHIP)
Centre For Health Informatics, NIHFW, Ministry of Health and Family Welfare

S.No	Clause of REOI	Clause Description	Query	Clarifications from CHI
1	9.1	For effective adoption of ICT in Indian healthcare- aligned with health sector goals under Digital India Programme- need for integration of and interoperability amongst various Health IT systems and creation of electronic health records (EHRs) of citizens along with pan-India exchange has emerged critical. Most of the patient records have a decentralized storage and gets trapped in multiple silos such as primary care, specialist, hospitals, pharmacy, home health care etc. Keeping these issues in view, MoHFW has decided to establish an „Integrated Health Information Platform (IHIP)".	Need detail of various EHR / EMR /his installed across various hospitals and their input/output.Are they web based or client server?Is vendor system required to write data back to respective EHR/EMR? This may not be possible.	All the existing EMR/EHR/HIS participating with IHIP will have to have two-ways data exchange. Details regarding installed applications in public health sector would be provided subsequently at RFP stage
2	9.2	IHIP is envisaged to work in the direction of enabling creation of the electronic health records (EHRs) of citizens and making EHRs available nationwide (through exchange mechanism) with the help of a centralized accessible platform. This would facilitate continuity of care, confidential and secure health data/records management, better affordability, optimal information exchange to support better health outcome, better decision support system, fewer redundancies and medical errors, low data redundancy, big data analytics etc. A framework and mechanism for unique identification for patients, healthcare providers/organisations and medical procedures would be incorporated so as interoperability (and thence longitudinal aggregation of electronic medical records) is attained amongst different Health IT Systems.	Is the centralized accessibility is limited to the portal or the entire HIE solution needs to be deployed in a centralized model?	To be outlined as relevant at RFP stage
3			Analytics / DSS need to be defined. Data to be captured and analytics to be run should be clearly defined. Both need to be specialization wise. What is specialization in each hospital? Different specialization has to have different DSS and analytics need to be properly defined.	
4	9.3	IHIP is proposed to encompass various components like eHealth applications, eHealth data and eHealth infrastructure. Business model for IHIP has been envisaged on the basis of a set of guiding principles - asset light platform, hiring infrastructure-as-a-service, offering application-as-a-service, cafeteria model of service offering on payment basis, and attaining financial sustainability in due course.	Please confirm Department has done or will provide the sizing for Cloud based Solution.	Under Proponent scope
5			infrastructure, Only central server or local level infra to be provided. SAAS and IAAS, Number of cases performed on an average and Number of radiological cases for accessing storage required	To be outlined as relevant at RFP stage
6			Does the department envisage procuring infrastructure services through NIC/Govt. of India Cloud/Meghraj initiative? Or Bidder can propose third party cloud service provider's services Also please advise if the data resides/stored within geographical location of India in an "Infrastructure as a Service" model?	Government infrastructure for network, connectivity, cloud computing etc. would be used. Details to be provided at RFP stage
7	9.4	Healthcare Management, EMR, EHR- on IHIP, tried and tested open source solutions offered by third parties (both public and private IT vendors) and complying with EHR Standards (notified by MoHFW in 2013)and other eGovernance Standards (notified by Department of Electronics & Information Technology-DeitY) would be hosted on IHIP. Various developers including innovative start-ups can host their standards compliant applications/solution-suites on IHIP after due process of evaluation by the Ministry. Users can use the applications taking a „Cafeteria Approach" i.e. to choose application from available options as per their need on „pay for use" basis. Detailing of envisaged business model for IHIP will be done at the stage of Request for Proposal (RFP). Individual hospitals and healthcare facilities/professionals will have to put in the required infrastructure – terminals, peripheral hardware etc. - in their premises in order to access and use IHIP.	In this statement, more clarification is needed on the meaning of "other eGov standards". It would be best to link those standards as an annexure or refer to them explicitly.	eGovernance Standards are notified by DeitY (pls refer www.meity.gov.in/content/standards-policies)
8			Would MoHFW or CHI define the minimum clinical data set that is required to be exchanged across hospitals and healthcare facilities?	Please refer EHR Standards 2013 for MDS in health record (www.mohfw.nic.in/showfile.php?lid=1672)
9			Would you accommodate a request if the individual hospital or group of hospitals would like to set up clinical data repository and registry that connects with IHIP HIE framework via federated model?	Model for HIE whther Centralised/Federated/Hybrid would be decided at RFP stage.
10			Request attach the notification as part of EOI	eGovernance Standards are notified by DeitY (pls refer www.meity.gov.in/content/standards-policies) Please refer EHR Standards 2013 for MDS in health record (www.mohfw.nic.in/showfile.php?lid=1672)
11			Not all EHR are putting the EMR data defined by Mohfw 2013. Will they be replaced? Required APP dev in IHIP system to be defined	Such systems would need to ehance dataset as per EHR Standards. Apps required in IHIP would be defined at RFP Stage.
12			"Cafeteria approach" and pay per use can be built into the system and it is possible to make system pay for itself by generating revenue from consultation but it will need lot of marketing expenditure and publicity expenditure which may run into Rs 100 Cr. The time frame of 5 years is too short for selected vendor. It is suggested that time frame should be 10 years & may be extended further by more 10 years where vendor may find suitable investor to get into this service & can also define revenue sharing between vendor and government	Modalities will be outlined at RFP Stage including funding support from Government.
13			In this statement, more clarification is needed on the meaning of "other eGov standards". It would be best to link those standards as an annexure or refer to them explicitly.	eGovernance Standards are notified by DeitY (pls refer www.meity.gov.in/content/standards-policies)
14			Since there are no EHR Standards certifying agency / authority, what will be the determining criterion / criteria to establishment the compliance / non-compliance to the abovementioned standards?	To be outlined as relevant at RFP stage
15			Please confirm if the the end user infrastructure shall be procured directly by facilities/professionals?	Yes
16			Who would be responsible for increasing the penetration and usage of IHIP? Will proponent managing the platform be responsible for generating revenue and governance structure to make it scalable and financially sustainable including putting Applications and Suites on the Platform? Who would bring the application developers and individuals hospitals and healthcare professionals to the platform –and manage them? Would it be for CHI, National Institute of Health and Family Welfare (NIHFW) bring the individual hospitals on-board this platform.	Centre for Health Informatics set up by MoHFW would be the nodal agency for all such management roles.
17	9.5	Sustainability of IHIP is a critical aspect to be addressed properly. For ensuring sustainability, IHIP is planned to explore various possible revenue sources including from health information exchange platform like real-time data services to different healthcare providers, asynchronous data analytics /customized reports for health care analytics organizations etc. However, in short-to-medium term, funding assistance from the government may be provided, till it achieves a critical mass.	Technical detail of each module to be provided	To be outlined as relevant at RFP stage
18			2states & five hospitals along with its EHR detail with its i/p, o/p and specialization to be defined .	
19			On what areas would the funding mechanism to be provided by the Government and what would be Quantum of this funding?	
20	9.6	Conceptual Diagram of IHIP	The IHIP appears to have four different buckets of systems / modules that do not appear to bear any co-relation to each other. Does this mean these are all for indicative purposes only? The IHIP contains such terms as OPD, IPD, Emergency, EHR, etc. What different functions are these supposed to perform?	
21	10.1	The scope of work encompasses: Designing of IHIP Development of IHIP & APIs required for interoperability Integration of different components of IHIP Deployment of IHIP Implementation (pilot in two states & five hospitals and then roll out pan-India) and thereafter maintenance of IHIP The detailing of Scope of Work with deliverables and respective milestones will be done at RFP stage.	Please confirm if the proponent needs to migrate existing data to IHIP? Especially for citizen Portal?	To be outlined as relevant at RFP stage
22			Please list down the scope for end delivery (PAN India) eg. Total number of hospitals, clinics, etc?	
23			Please detail out total number of application users and concurrent users?	
24			Please detail out the training requirements?	
25			Is there any requirement for DR site provisioning?If so, by whom? Vendor or Ministry?	
26			Is there any requirement for multi-lingual capability for data exchanged or database?If so, for how many languages?	
27			**Development of IHIP & APIs required for interoperability:-**need future description specialty and input wise	
28			**Implementation (pilot in two states & five hospitals and then roll out pan-India) and thereafter maintenance of IHIP:-** Analytics specialty use to be defined.	
29			Integration of different components of IHIP We would request you to kindly please provide a list of components that need to be considered for integration with IHIP.	
30			Deployment of IHIP It has been assumed that all necessary arrangements for deployment (identification of Data center etc.) shall be undertaken by MoHFW. Proponent shall only take care of deployment of IHIP on pre-setup hosting environment. Please confirm	Yes, Infrstructure to be provided by CHI/MoHFW

Reply to Queries **Date: 16-Sep-2017**

Request for Expression of Interest (REOI) for "Design, Development, Integration, Deployment, Implementation and Maintenance of Integrated Health Information Platform (IHIP)
Centre For Health Informatics, NIHFW, Ministry of Health and Family Welfare

S.No	Clause of REOI	Clause Description	Query	Clarifications from CHI
31			Please confirm who will be responsible for integrating external HIS system?	Under Proponent scope . Details to be provided at RFP stage
32			**Designing of IHIP:-** Several EHR deployed in the said hospitals are/may not web based and have unique data base structure.Who is responsible for porting data from said EMR to the IHIP system?	Under scope of proponent. Participating entities would open APIs . Details to be provided at RFP stage
33	11	Design, Development & Demonstration of IHIP T0+ 4 Months = (T1) Pilot of IHIP in two States & 5 Hospitals T1+ 3 Months = (T2) Roll out of IHIP pan India T2+ 48 Months	Request to red T0+4 as T0+6 and T1+3 to be read as T1+6	Not Agreed. For extension in last date for submission of EOI, please refer corrigendum issued.
34			We would request the Department to extend the timelines for submission of the proposal as this will allow the Bidders to get sufficient time for preparing a detailed response and also partnering with agencies who could successfully deliver the project.	
35			Timelines of 4 months for Design, Development and Demostration of application/platform is less. Please reconsider these timelines with minimum 8-10 months.	
36			Does the company/ consortium members have flexibility in terms of the timeline given in this section? Especially for T1 and T2.	
37			Can we please extend the submission date by 3 weeks considering the huge amount of work that needs to be put in.	
38			It is mentioned that design, development and demonstration of IHIP will have to be done within 4 months. Is there a preference to use a COTS product considering tight implementation timelines?	
39			The design development and demonstration of the IHIP with concurrent adoption in Pilot locations (two state and 5 hospitals) is envisaged over 7 months timeframe. After 3 months from start of the design & development of IHIP, the solution should be substantially ready for demonstration. Request you to share additional details of the State and Hospitals identified to be covered in the pilot phase to gauge the impact on the timeline of implementation? Is there any O&M phase also? The Timeline for Design, Development & demonstration of IHIP is given 4 months and remaining 3 months for rollout in 2 states and 5 hospitals. Request you to extend the duration.	
40			Timeline (T1) for completion of Design, Development & Demonstration of IHIP is defined as 4 Months which appears to be short given the detailed requirements are not available. The same should be changed to 12 Months.	
41			Request you to please extend EOI submission timelines by atleast 3 weeks?	
42			As per the standard procedure, the Software development lifecycle is of 9 months.Request you to increase the time of development from 4 months to minimum 9 months for a successful product development	
43	13	For all the EOIs received before the last date and time of submission, the EOIs and accompanying documentation of the Pre-Qualification will become the property of CHI and will not be returned after opening of the EOI. CHI is not restricted in its rights to use or disclose any or all of the information contained in the EOI and can do so without compensation to the proponents. CHI shall not be bound by any language in the EOI indicating the confidentiality of the EOI or any other restriction on its use or disclosure.	For all the EOIs received before the last date and time of submission, the EOIs and accompanying documentation of the Pre-Qualification will become the property of CHI and will not be returned after opening of the EOI. ~~CHI is not restricted in its rights to use or disclose any or all of the information contained in the EOI and can do so without compensation to the proponents.~~ **However,** CHI shall ~~not~~ be bound **to ensure** ~~by any language in the EOI indicating~~ the confidentiality of the EOI ~~or any other restriction on its use or disclosure.~~	No change
44		Consortium Partner	Can one company participate in more than one consortium?	No
45		Consortium Partner	Can consortium members be allowed to be changed after EOI?	No, since consortium will qualify on the basis of collective expertise & experience of the members
46	18.6	A board resolution authorizing the signatory of EOI to sign as a binding document and also to execute all relevant agreements forming part of EOI should be included in the envelop.	Authorisation letter, issued by valid Power of Attorney holder (dully authorized under board resolution), to sign the EOI response shall be acceptable. Kindly confirm.	No change
47	18.7	CHI will not accept delivery of EOI in any manner other than that specified in this REOI. EOI delivered in any other manner shall be treated as defective, invalid and rejected.	We request to let us submit the reply in Oracle standard EOI response format as we use the same format globally.	No change
48	10.2.1,a	Accessibility a) A centralized web-based cloud compliant application with a simple and user friendly graphical user interface (GUI) for easy and fast mode of operation and usability. The application should be accessible by any Healthcare Service Provider organizations (both public and private), healthcare professionals, government and citizens via laptop, desktop, mobile applications on wired or wireless connectivity. Note: A comprehensive solution document consisting of the technical architecture solution for handling connectivity scenario, data handling capabilities/data sizing should be corresponded. Offline mode of operation needs to be proposed by the selected proponent.	Please provide details of offline scope for IHIP? Please provide clarity around the offline / local servers and storage in State level Hospitals requirements?	To be outlined as relevant at RFP stage
49			Please confirm if the hospital HMIS system will be operational and when HIE system is up, data will be synched?	
50			What would be the role of IHIP vendor in hosting of third party HMIS applications on the platform? At what stage are these third parties expected to be identified and involved in the project - during pilot or roll-out?	
51			Please provide the details how to Access of Patient/citizens records In case of patients are referred to another hospital, the data captured from the hospital referred will be uploaded to the to centralized application.	
52			Who will provide the cloud services for hosting the IHIP? Is it vendor or Ministry?If it is by vendor, what class of DC is envisaged?	CHI/MoHFW.
53			Please clarify if a solution document consisting of technical architecture is expected as part of EOI response. Since detailed requirements would be shared at RFP level, it is suggested that solution details should be included as part of RFP response.	A brief but comprehensive solution document with overview of project, proposed solution, different elements/key components etc. will be required with EOI, however the detailed solution, tech architecture, solution proposed etc. would be required at RFP stage.
54			For centralized web-based cloud compliant, its mentioned offline mode to be proposed. Need further details. Offline mode for Mobile Application?	To be outlined as relevant at RFP stage
55			What is the web application for? What will the listed users do on that app?	
56			Would the use case scenarios, data handling capabilities/data sizing information for the web-based application be provided as part of RFP? Or Would this be incorporated as part of discovery phase during the designing of IHIP?	
57			Please confirm that proponent should submit a detailed solution document at RFP stage and not as part of EOI	A brief but comprehensive solution document with overview of project, proposed solution, different elements/key components etc. will be required with EOI, however the detailed solution, tech architecture, solution proposed etc. would be required at RFP stage.
58	10.2.1,b	The IHIP framework will offer interface with various functional modules across different standards compliant Healthcare Management Information Systems hosted by third parties on IHIP. The various modules of healthcare management information system as offered by third parties & hosted on IHIP would include EHR related modules. An indicative list of such modules is given as below (the list is non-exhaustive): Out Patient Department (OPD) Module Admit Discharge and Transfer (ADT) Module In Patient Department (IPD) Module Emergency module Laboratory Information System (LIS) Module Radiology Information System (RIS) Module E-Prescription Module Telehealth Module External Application Module (wearable device and mobile application interface) Note: The above is non-exhaustive. IHIP would also require to ensure interface/data exchange (through middleware as needed) with HISs, which are not EHR Standards compliant, in order to ensure continuity of health records.	Does "HISs which are not EHR standards compliant" mean those HISs that are not on the IHIP platform and being used by individual hospitals?	No
59			Does the Ministry have the list of these third parties – do they exist already or they will build these systems only after the IHIP is in place?	To be outlined as relevant at RFP stage
60			Would the third parties hosted modules on IHIP be on multi-tenancy, or would they be on separate single instance? For the purpose of the pilot implementations, how many modules are we looking to integrate? And what type of modules/data that need to be integrated?	
61			third party vendors,They will push the data or bidder has to pull from their application	Both Push and Pull
62			Please define name of applications to be interfaced	To be outlined as relevant at RFP stage
63			Is HIS part of the offerings to be hosted? What are the external applications expected apart from the list provided in 10.2.2 A, Interoperability section?	
64			Is there a finite set of 3rd party apps or modules which will be ported on to the platform? How many APIs approximately will be needed to be published by the platform? Who will provide these requirements? Are the requirements, functionality and design for the listed modules already completed?	
65			The middleware for HISs that do not meet EHR standards, would middleware act as the point where above HISs information is converted into EHR compliant or would only be the point of storage and retrieval of the information from these HISs for reference?	
66			Under accessibility for offering interface hosted by third parties, the selection of the third party would be done by the proponent or would there be a separate process for their selection?	

Reply to Queries **Date: 16-Sep-2017**

Request for Expression of Interest (REOI) for "Design, Development, Integration, Deployment, Implementation and Maintenance of Integrated Health Information Platform (IHIP)
Centre For Health Informatics, NIHFW, Ministry of Health and Family Welfare

S.No	Clause of REOI	Clause Description	Query	Clarifications from CHI
67			For data exchange with HISs which are not EHR complaint, who will write the adapters? Does the platform team only publish APIs and 3rd parties will write the adapters?	
68	10.2.1,c	Our vision is to assign Unique Health Identifier (UHID) to individuals- proposed to be linked with the ADHAAR number and personal mobile number- and unique identifier for Healthcare Providers/Professionals. Additionally, other GoI issued identification numbers such as EPIC / Voter ID, Driving License, PAN, Passport, Ration Card etc. should also be linked for unique identification of the citizen for facilitating de-duplication of the assigned UHID to identify duplicate records for the same patient. The UHID number should also have an option of linkage with alternate ID"s issued from various health facilities along with National Identification Number (NIN) assigned to Healthcare service providers (both public and private) of India.	For the purpose of pilot phase: What is the total number of unique patients, providers/professionals to be tracked? How many distinct source IT systems would create patient identifiers (Registrations of patient) in your environment? Do the patient registraton systems supports IHE-compliant patient identity-cross reference manager / Patient demographic query supplier (PIX/PDQ)?	
69			Request you to please remove the Ration Card as this document most of the time belongs to whole family and number will be same for all members.	
70			What is the initial size and expected scalability required for storage at central and local sites?	To be determined by Proponent
71			Whose responsibility is it to handle the ID related issues - de-duplication and prevention of multiple UHIDs for the same patient, patients with fake ids, patients enrolling multiple times with different ids? Are biometrics also captured and used for authentication of patients as part of uhid?	Under the scope of IHIP. Will be detailed at RFP stage
72	10.2.1,d	Online account access via citizen portal hosted on NHP as part of IHIP application, for every citizen through which the past medical history/health record could be viewed, edited (except deletion) and uploaded by the citizens themselves in EHRs. Additionally, the portal should be capable of capturing patient/citizen's health data from various wearable devices and mobile application(s). Note: Users would not be allowed to perform Delete operations across the IHIP application. However, archival of the data would be permissible.	Can citizen upload a file / image for past medical history? What all various file types are supported?	The function would be there however all the relevant infromation would be shared at the RFP stage.
73			Please provide data size limit for citizen portal / per citizen?	
74			It may be please clarified whether the online account access and the necessary modification regarding the same on the National Health Portal (NHP) is scope of the Bidder. It may also be clarified whether development of NHP is part of the scope of Bidder.	To be outlined as relevant at RFP stage
75			How many years of clinical history do you plan to keep for an individual? For the edition of health record by an individual, do the changes need to flow back to Source modules?	Would be covered under ehealth data private act under formulation.
76			Whose scope is to build the citizen portal hosted on NHP accessing the services of IHIP?	under the scope of IHIP
77			Is the proponent expected to provide SMS services? What is expected monthly volume of SMS expected and growth percentage YoY?	SMS services will be in scope of IHIP however the SMS gateway will be provide by CHI/MoHFW.
78			Whose responsibility is it to ensure interoperability of patient records in different EMR formats coming from different providers/hospitals?	Under Proponent scope
79	10.2.1,e	Generation of analytics dashboards and reports via analytics tools for different types of analytics using anonymized health data in order to facilitate effective policy-making decisions for public health at national level etc.	Please list out details for generation of analytics dashboards and reports?	Detailed requiments for generation of analytics dashboards and reports would shared at time of RFP stage.
80			Under old patient registration, the system shall provide link to view patient wise past concessions/ schemes undertaken in previous visits to validate any current claims/ requests and categorizing.	Yes
81			Are there any preferred analytics tools for the citizen portal project? Or would this be considered as part of this RFP proposal?	Analytics dasboard and report is the requirment of IHIP solution and is part of proposal.
82			Does the IHIP vendor need to provide for analytical tool for the dash board or various vendors can host analytical tools and IHIP vendor needs to integarte them.	
83			Entire country-wide imaging data will be required for public health policy making? If not, is there any guideline for medical imaging record selection for de-identification?	To be outlined as relevant at RFP stage
84	10.2.2,a	Platform architecture should be open, flexible and dynamic in nature with easy application programming interface (API) communication with other health information sources including HIS of various hospitals, laboratories, physician clinics, Emergency Ambulance services, AYUSH, MCTS, NIKSHAY-TB, IDSP, CGHS, and other third party EHR application(s) permitted to be hosted on IHIP only after due process of evaluation and approval of CHI or MoHFW. Note: The selected proponent would be expected to understand and identify the interface requirements including an API toolkit for integration between the existing as well as proposed solution.	It is requested to share the list of stakeholders with whom the Bidder will have to discuss and integrate the solution. Also we understand that customization in the stakeholder systems (e.g. AYUSH, CGHS, etc.) if any will be out of scope of the Bidder's activities.	
85			Is there a preferred international standard for exchange of electronic health records such as IHE XDS integration standards, internationally adopted standards to register, store and retrieve healthcare records. It will be good to consider IHE XDS as part of the EOI/RFP	It will as per EHR Standards notified by GoI
86			Are AYUSH , MCTS, etc. to be hosted on IHIP? It may not be possible as AYUSH does not follow the EMR workflows. Possibility to be examined in detail, are these system having any EHR system?	To be outlined as relevant at RFP stage
87				
88			Is that the exhaustive list? If the proponent is expected to understand and identify interface requirements, it will be additional work for each new solution/module.	Not exhaustive list. To be outlined as relevant at RFP stage
89	10.2.2,b	Generation of standards compliant Electronic Health Record (EHR) for every citizen. The application should perform real-time collection and aggregation of patient specific clinical data trapped in multiple silos from various sources including EMR modules of HIS systems at hospitals, individual physicians and other health professionals in order to improve quality of care by reducing duplication and manual transmission of data across different stakeholders/providers/hospitals.	Is it going to be mandatory for all the Providers to enter Health Record in the IHIP?	To be outlined as relevant at RFP stage
90			"...including EMR modules of HIS systems at hospitals, individual physicians and other health professionals". There would be hundreds of disparate HIS systems being used by individual hospitals/physicians/other health professionals. Is the expectation to interface IHIP with all these systems' EMRs?	Yes.
91			Would the standards compliant EHR records be based on standard format like Clinical Document Architecture (CDA)? Would the data elements to be captured pre-defined or would this be done as part of discovery phase during the design phase?	To be outlined as relevant at RFP stage
92			Does patient need to have access to his record? Does he have access today?	IHIP would ensure access to records by patients
93			Under list of module ADT is given and also Inpatient Management. The Admission part of ADT itself covers Inpatient Management. So what is the difference you would like to provide here ? It is also given that list is non exhaustive. Until the complete list of required modules are not given the actual scope of work in HIS can't be determined.	To be outlined as relevant at RFP stage
94			Is the responsibility to just publish the standard format for EHR/EMR and APIs for adapters, or must the proponent actually take the EMRs in different formats and convert them to the IHIP EHR format?	
95			Under interoperability "generation of standards compliant EHR for every citizen", what is manual transmission of patient specific aggregated data across different stakeholders/providers/ hospitals?	
96			Is it mandatory for every public/private radiology centers, hospitals with radiology facility to be on IHIP?	
97			It is assumed that the source of heavy image data records would be PACS. Will PACS be one of the systems hosted on IHIP? Does PACS from individual hospitals also have to be interfaced?	
98			Is there a preferred international standard for exchange of Imaging data records such as XDS-I.b standards. It will be good to consider XDS-I b as the proposed standard for image exchange given the large scale adoption globally.	It will as per EHR Standards notified by GoI
99			Is PACS available in all hospitals? Without PACS the CT, MRI, DXRAY data to be sent to IHIP may not be possible.	Not in all hospitals as of now.
100			Please confirm Department has done or will provide the sizing for stroge requirement for A) EHR B) For heavy image data records (like X rays, CT scan, MRI, ECG, and Angioplasty) C) Policy for maintaing the records of indivaisal Patient/Citizen	Proponent has to do sizing of storage for all types of data however the relevent details will be provided in the SOW of RFP.
101			What is data retention policy?	As per the guideliness of Government
102			We assume cloud storage for eHealth Application, will be responsibility of proponent who onboards such products on IHIP platform and offer services as "Pay for Use" model. Request you to please clarify.	To be outlined as relevant at RFP stage
103			Who will provide storage for citizen portal and CRM tool?	CHI/MoHFW.
104			Request you to please share the estimated number of transactions, number of records, average size of the record, retention and archival policy for HIE?	To be outlined as relevant at RFP stage

Reply to Queries **Date: 16-Sep-2017**

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S.No	Clause of REOI	Clause Description	Query	Clarifications from CHI
105	10.2.2,c	A centralized storage layer, as required, of Health Information Exchange (HIE) for storing the heavy image data records (like X rays, CT scan, MRI, ECG, and Angioplasty) and consequently generating a link/metadata of the image data records for the health institutions in order to access these records. The health institutions may have local storage of such data for a given period of time in addition to the centralized HIE storage of the heavy image data records. In cases of patients getting referred to another hospital, the data captured from the hospital referred would be available in HIE storage layer.	What will be the size of the storage envisaged? Will it have a typical Citizen Health Volt type concept where the Demographic data along with metadata of the health records are kept for access of the patients with a typical size of vault of 10-15MB per patient/citizen and the heavy files are kept in the centralized architecture with local storage a(may be for 12-24hrs sync up option) at the point of generation of DICOM aand other image compliant files.	Proponent has to do sizing of storage for all types of data however the relevent details will be provided in the SOW of RFP.
106			What is the forecasted storage capacity per year required for imaging data?	
107			Is it going to be pull and/or push model? Who decides which imaging studies will be stored in IHIP?	To be outlined as relevant at RFP stage
108			Who will ensure compatibility at the edge systems?	
109			IHIP has to support only DICOM studies or it should support non-DICOM files as well?	
110			Consumers (healthcare Providers) has to import Patient's medical imaging record from IHIP into their PACS systems before they can use it or it can be viewed remotely without download/Import?	
111			What should be the retention policy for individual patient's imaging record in IHIP? Do we want to retain the imaging record for perpetuity? If not, what would be the archival policy?	
112			Is it okay to use open source PACS and Image viewers? What are the criteria for using OSS?	
113			What is the forecasted storage capacity per year required for imaging data?	Proponent has to do sizing of storage for all types of data however the relevent details will be provided in the SOW of RFP.
114			Is it going to be pull or push model? Who decides which imaging studies will be stored in IHIP?	To be outlined as relevant at RFP stage
115			Is it mandatory for every radiology center, hospital with radiology facility to be on IHIP?	
116			Who will ensure compatibility at the edge systems? How hospital PACS will send data to IHIP?	
117			What should be the retention policy for individual record in IHIP? Do we want to retain the imaging record forever? if not what would be the archive policy?	
118			Entire country-wide imaging data will be required for public health policy making? If not, is there any guideline for medical imaging record selection for research purpose?	
119			What is the authentication and authorization mechanism IHIP intends to implement for data exchange?	
120			What is the commercial model of IHIP especially for imaging?	
121	10.2.2,d	Generation of timely alerts and notifications via Emails, Voice and SMS to all stakeholders. SMS Gateway should support both "Push and Pull" services.	Will Ministry provide Email, SMS & Voice Gateways?	
122			It is assumed that access to SMS Gateway shall be provided for by MoHFW through the selected Data Center operator. Please confirm. Content of email, voice and SMS shall be finalized by MoHFW and would be provided for. Please confirm	
123			If citizens are provided option of editing the HER then the data integrity will be lost. So should we provide the edit option to citizens also?	NO.
124	10.2.3	The design & development and demonstration of the IHIP with concurrent adoption in pilot locations (two states & 5 hospitals) is envisaged over 7 months timeframe. After 3 months from start of the design & development of IHIP, the solution should be substantially ready for demonstration. After successful pilot, IHIP will be rolled across remaining States/UTs over the period of next 4 years. The system architecture should be capable for large scale adoption and an optimal approach for progressive nationwide roll-out.	Please clarify on pilot locations being "2 states and 5 hospitals"? Does this mean only 5 hospitals across 2 states would be part of the pilot? What would be the scope of implementation during the pilot?	To be outlined as relevant at RFP stage
125			Would hardware infrastructure be considered as part of the IHIP proposal? Given the scalability requirements, would you only be looking at infrastructure that provides capacity on demand?	
126			Are you planning to set up centralized repository and registry in the pilot implementation? Could you please share more details regarding the deployment model envisaged for this project implementation?	
127			What will be the scope of the deployment in two hospitals? Will it be limited to 5 Hospitals or entire state health system that includes PHC's, CHC's, Secondary and Tertiary care facilities, private hospitals and laboratories? Could you please provide more details regarding the scope of the pilot implementation?	
128			What are the 2 states and 5 hospitals that are being planned for the pilot?	
129			We understand that the project if for 4 yrs after 7 months of implementation. What happens after 4 years.	
130			The rules and criteria (10.2.3) for successful pilot would that be decided by the proponent or be based on any other criteria as set by MoHFW or anyother body, or will information on these be mentioned in the RFP?	
131			Under scalability (10.2.3), what does substantially ready for demonstration mean (for application in 3 months), will this be provided in the RFP under the milestones and deadlines, please provide some clarity?	
132			It is given that the design and development of product should be completed and ready for demo in 3 months but until we do not have complete list of modules the timeframe can't be decided / provided.	
133			From Contract duration perspective, will the initial contract be signed only for the duration of pilot (7 months) or will it be for 55 months. (as there would be large investment from the proponent initially). Please confirm? Please share details on the projections and the volumes and scale of this rollout?	
134			Whose responsibility is the data management for these roll outs? Who will own the data cleanup, transformation, ensure integrity?	Under Proponent scope
135			Is Vendor expected to do the entire deployment across the country for IHIP ? What support will be provided by the government?	yes, other information would be shared at RFP stage
136	10.2.4	The system developed should have adequate level of data privacy, cloud portability, and secure interoperability of data, when stored or retrieved or transmitted across the Health IT systems.	Would you require encryption of data at rest and during transmission?	As per Standards notified by GoI
137			Is there any requirement for Security Audit? If so, who will do it?	Yes. Details to be provided at RFP stage
138			please define adequate level of security	To be outlined as relevant at RFP stage
139			What is the authentication and authorization mechanism IHIP intends to implement? Should it be multi-factor authentication and is there anything already available for use. Does data need to be encrypted in the database or only during transmission?	
140	10.2.5	Audit Log Maintenance of audit trail which would be a detailed record showing all the user-defined events of the application and the transactions / operations performed by the concerned user during a given period of time. Audit log must display the following details, but not limited to, with filter /sorting criteria options: (the list is non-exhaustive) Patient ID and User Name Module – Module Sub Module – Screen – Section – Field Name Date and Timestamp Updated Value. Activity Performed Note: The audit log should be updated as per the mandated rule/law by GoI at any time.	If the audit logs are to be updated as per the GoI, then there are increased chances that the existing application will change, which under scalability (10.2.3) is not a desired outcome, will there be any relaxation that would be provided to the proponent under the criteria for scalability?	
141			Is there any requirement in the maintenance of Integration Logs over and above to Audit Logs? Objective is to keep track of data exchanges between IHIP and the rest.	
142		A 24x7 support center for feedbacks, grievances (for both patients and users), technical or operational support. The response center would serve as a single point of contact for all ICT related	Is there any location preference for the hosting of the 24x7 Response Centre	
143			Is there any minimum on the number of resources to be provided in the Response Centre	
144			Is there any minimum qualification of the staff manning the Response Centre?	
145			How many seater call center is envisaged. Is there a phased level increment in seats planned. Who will provide the space and the infrastrcuture for the Response center.	
146			We would like to confirm that managing/operation of the response center is part of proponent's scope of work. Secondly, implementation of integrated CRM a part of scope of work of the proponent.	Yes, Under Proponent scope planned as of now. Details to be provided at RFP stage

Receipt No : 370047/2016/E-GOV

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S.No	Clause of REOI	Clause Description	Query	Clarifications from CHI
147	10.2.6	incidents, service requests, feedbacks as well as suggestions. The bidder should propose an integrated CRM system to handle case management and also provide help to users using innovative technologies like chat, co-browse functionalities.	A 24x7 support center for feedbacks, grievances (for both patients and users), technical or operational support. Please clarify the number of seats expected initially and growth percentage YoY? Also, please confirm if the support required in any regional languages and is it expected to establish multiple support centers like state wise?	To be outlined as relevant at RFP stage
148			We assume the support center shall serve ICT related issues for accessing IHIP. Is department looking for a toll free number for response center? Please confirm	
149			Please share additional details in terms of volumes projections and languages to be supported and estimated total number of user accessing the platform? Also, please share the % increase in volume of no. of users envisaged YoY?	
150	10.2.7.a	There is a statement that reads: "*Apart from above, the selected proponent needs to follow all the international and national industry standards.*"	This is open ended. Any standard that needs to be complied with should be explicitly mentioned so that the SIs can verify compliance	
151	10.2.7.a	Apart from above, the selected proponent needs to follow all the international and national industry standards.	Request add *Apart from above, the selected proponent needs to follow all the international and national industry standards* like HIPAA & Hitech compliance	
152	10.2.7.a	There is a statement that reads: "Apart from above, the selected proponent needs to follow all the international and national industry standards."	This is open ended. Any standard that needs to be complied with should be explicitly mentioned so that the proponent can verify compliance.	
153	10.2.7,a	The IHIP application should comply with the EHR Standards for India. Few of the standards are mentioned below (the list is non-exhaustive): i. Medical Image and Scanned Records Standards: NEMA DICOM PS3.0, PACS and Documentary data (scan for prescriptions, summaries etc.) ii. HL 7: To be used for exchange and seamless handling of inbound and outbound HL7 messages from any system that has similar capabilities; v2.x (V2) or v3.x (V3) or above. The proposed IHIP application would be adaptable for intermediate implementation of HL7 FHIR (whenever required). iii. Laboratory observations Standards: LOINC coding standards iv. WHO-FIC Standards: The WHO Family of International Classification (WHO-FIC) standards primarily used for aggregated information and statistical/epidemiological analysis reporting, for regulatory purposes as mandated by the health regulatory, intelligence, and various research bodies. v. Clinical Healthcare Terminology Standards: SNOMED-CT coding is used to capture problem list, allergies, diagnosis, procedures etc. primarily used for clinical analytics and clinical decision support systems. vi. WHO International Terminologies on Traditional Medicine Standards: For Ayurveda, Yoga, Unani, Siddha, Homeopathy systems of medicine (whenever notified). Note: Apart from above, the selected proponent needs to follow all the international and national industry standards.	Is the IHIP application expected to be developed on open source technologies?	Yes, open source technologies are preferred by Government. But, agency may suggest other solution with proper justification
154			Globally many of the successful HIE implementations have adopted IHE frame work and it will be good to consider them to be part of the standards highlighted in the EOI	To be outlined as relevant at RFP stage
155			What about ICD 10? How many hospitals are following? What happens if not implemented? Many other standards may also not being followed. There has to be standardization for system to work in all hospitals, who will do that?	
156	10.2.7,b	The proposed IHIP application would be based on the standards for Patient Identification such as MDDS for demographics, MDDS for health domain (whenever notified); Open Source solutions such as Open API, openEHR (whenever notified), Open Standards policy; Guidelines for Indian Government Websites (GIGW); and other relevant e-governance guidelines as per the norms suggested by DeitY, MCIT, Government of India.	please confirm that open source is preferred solution or mandatory requirement. also Could you please provide the Details/link as to where the referred standards have been published? Is the standards published by the global community at https://opensource.org/osr acceptable? Request you to consider that bidder can suggest proposed application in any technology requirement.	To be outlined as relevant at RFP stage
157			When are the MDDS for health domain likely to be notified.	
158			IHIP will support DICOM Image Viewers or it will be used only as storage repository? Is it okay to use open source DICOM Image viewers?	
159	Annexure-I	Key Issues to be addressed	Typically based on our experience, silo disparate systems like EHR will also pose a challenge for terminologies differences. Could we verify if terminologies normalization is a challenge that should also be addressed? (i.e. Healthcare Terminologies – ICD9/10/SNOMED, and nomenclature Coding Standards)	It needs to be addressed.
160	Annexure-I	For eHealth applications on IHIP, tried and tested open source solutions offered by third parties (both public and private IT vendors) and complying with EHR Standards (notified by MoHFW in 2013) and other eGovernance Standards (notified by Department of Electronics & Information Technology-DeitY) would be hosted on IHIP.	Why only open source. This is restrictive. Solutions may be available out of open source domain which may be good. Request you to dilute this clause.	Yes, open source are preferred by Government. But, agency may suggest the other solution with proper justification
161	Annexure-I	E-commerce	Who will provide the payment gateway for E-commerce platform?	To be outlined as relevant at RFP stage
162	Annexure-I		What are the back up requirements. How long should data be stored online and in tapes/discs	
163	Annexure-I		What decision support system is required	
164	Annexure-I		What existing systems will plug into IHIP ? What portions of the system are already available that can form part of the solution ?	
165	Annexure-II	National Identification Number	Allocation of National Identity Number (NIN) to each Health Facility of India (HFI), It is assumed that allocation of NIN will not be part of IHIP deployment	
166	Form I, Covering Letter	Covering letter to undersign the offer to Design, Develop, Implement, Integrate, Deploy and Maintain "Integrated Health Information Platform (IHIP)" in accordance with your Request for Expression of Interest	We will recommend to append to this covering letter: - as a product company we have capability to design, develop and implement, however, the SI does the maintenance and support services. Since, it is at EOI stage the consortiums are not firmed.	Not Agreed
167	Form III, Financial details of organization	**(Mandatory Supporting documents)**:- Work Orders / Client Certificate (including the cost details of the project excluding hardware components) confirming year and domain of activity should be attached. Supporting documents for cost of project undertaken to be provided. In case of foreign currency projects, the project value should be shown in INR as per the conversion rate prevailing at the time of award of the work order.	We will recommend to append to this clause: - Since, most of the projects are conducted under NDA, hence, we can only provide the public domain information.	
168	Form III, Financial details of organization	Revenue (in INR crores) from Health-IT businesses (excluding turnover from hardware) from the following three business streams: /Healthcare Management Information System enabled systems covering data integration, data warehousing and data management.	Revenue (in INR crores) from IT businesses	
169	Form IV	SIMILAR PROJECT EXPERIENCE : Mandatory Supporting Documents: a. Work Orders / Client Certificate (including the cost details of the project excluding hardware components) confirming year and domain of activity should be attached. Supporting documents for cost of project undertaken to be provided. In case of foreign currency projects, the project value should be shown in INR as per the conversion rate prevailing at the time of award of the work order.	Most International customers have NDAs in place with us and are averse to sharing details, what is the alternative? Is it ok if we share details you have asked for in the word format by masking client names.	
170	Form IV	b. The Company(s) / Lead Proponent should produce the "satisfactory completion of works certificate" from the clients in reference to the works they have cited.	Most International customers have NDAs in place with us and are averse to sharing details, what is the alternative? Is it ok if we share details you have asked for in the word format by masking client names.	
171	Form IV	c. Complete details of the scope of the project should be provided to indicate the relevance to the prequalification criterion (which is part of minimum qualification criteria).	Some projects are given as end to end in a fixed bid model some of a similar scope would have been given in T&M model and with smaller project components which would ultimately lead to larger program . Example - HIS, EMR (they give module wise as separate projects). Such as OPD , IP, Pharmacy, OT, Inventory. Requesting to confirm if such supporting documents would meet the eligibility.	Will be decided by CHI depending on the details furbished by proponent
172	Pg-38		**Components & Architecture** :- From the conceptual diagram, our understanding is that the scope is limited to the design & implementation of the Interoperability Layer & Service Deivery Layer. Please confirm.	To be outlined as relevant at RFP stage
173	Pg-39 eHealth infrastructure	Hosting environment and DB management :- Hosting of servers -application, database- on Cloud	For cloud hosting of servers – applications, database, would you be looking at only private and/or Private cloud options?	

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174	Page 40/Conceptual Diagram of IHIP		Please specify which of these components are part of scope of IHIP solution and which are external systems?	
175	miscellaneous		Considering the applicable standards for privacy and data integrity, is there any preference over IT or Cloud architectures (onsite or offsite). Or is the vendor free to suggest possibilities ?	
176	miscellaneous		In the coming days/weeks - Could we engage with you to understand requirements further.	Not Agreed
177	miscellaneous		*What are the timelines and budgets for this project (estimated cost of project works)?*	Time lines mentioned in REOI
178	miscellaneous		Will the proponent be allowed submission of bid with deviation. Deviation submitted should not be ground for disqualification or invocation of EMD. Both parties shall mutually agree on appropriate adjustment to RFP/Contract Terms as per deviations sheet. Would request confirmation on deviation clause and that it would not be a ground of invocation for EMD.	No
179	miscellaneous		Please provide the payment schedule? Will the payment be milestone based for the pilot?	To be outlined as relevant at RFP stage
180	miscellaneous		Can CHI share details on the limitation of liability and Liquated Damages / Penalty clauses that it plans to propose?	
181	miscellaneous		Please confirm if the proponent sub-contract?	
182	miscellaneous		Will the proponent be eligible for termination charges in case of termination for convenience? Proponent would like to assess the risk as there would be investments from the vendor in terms of deployment of resources and technology cost	
183	miscellaneous		Please confirm if CHI proposes to have a tax inclusive or tax exclusive price? What is the contracting and billing entity?	
184	miscellaneous	Eligibility Criteria and Evaluation	As we understand that similar work has not happened in India and mostly we find similar work has happened Internationally. We request you to consider Credentials (Certifications, Work Experience and Resources) of Consortium Partners along with the Lead Bidder collectively in order to strengthen our Capability to deliver the project requirements	This is the purpose of allowing consortium.
185	miscellaneous	Consortium Partner	After shortlisting in the EOI Stage, can we add or change the Consortium Partner, kindly clarify.	No
186	miscellaneous	Consortium Partner	We request you to increase the Number of Consortium Partners from 2 to 3; as we understand that it will be difficult for 2 Partners to meet the Criteria.	Total number of members in consortium including lead proponent is limited to 3.
187	miscellaneous		This REOI does not have any legal terms and conditions of the services agreement or contract. Is there any specific reason for this.	To be outlined as relevant at RFP stage
188	miscellaneous		DO you have such legal terms and conditions for service agreement or contract separately?	
189	miscellaneous		If you have such legal terms and conditions, We request you to make available along with pre-bid replies or corrigenda such Standard/Template Format for Agreement with terms and conditions. We need to review them before we can agree to it. We do not sign without review and legal vetting by our Legal Department	
190	miscellaneous		MoH&FW is currently finalising the provisions for the legal aspects of EHR. What impact does CHI anticipate regarding conformance to its provisions at a future date?	
191	miscellaneous		Are the various functional requirements represent minimum or maximum?	
192	miscellaneous		At a minimum such an Agreement shall contain the following clauses among other boiler plate provisions of the Contract law. 1. Limitation of liability and disclaimer of indirect damages 2. System Requirement specification 3. Change Management Procedure 4. Acceptance Procedure 5. Cost Escalation Procedure 6. Payment Terms and redressal steps for late payments by Client. 7. Intellectual Property Rights Protection and Residuary Rights 8. Warranty and Indemnity by the Client 9. Client responsibilities for Data Protection 10. Termination clause containing rights for both service provider and client. 11. Dispute resolution Process 12. Non-exclusivity 13. Non solicitation 14. Applicable law and jurisdiction 15. Entire Agreement	To be outlined as relevant at RFP stage
193	miscellaneous		or) shall the Service Provider propose any Template of such Service Agreement in its Proposal?	To be outlined as relevant at RFP stage
194	miscellaneous		Who would users to be trained on system? What is the scope of training expected?	
195	miscellaneous		Will the selection of the proponents for IHIP, depend only on the company/consortium experience in managing or implementing health information systems?	
196	miscellaneous		Is this Expression of Interest given for understanding the markets perspective regarding the practicability and applicability of IHIP and does this include any details pertaining to budget?	Proponents have to submit a broad solution framework in EOI.
197	miscellaneous		Is the expectation for IHIP application to be a grounds-up development or for customization and implementation of COTS products?	To be outlined as relevant at RFP stage
198	miscellaneous	Please provide/suggest the revenue model for the OEMs who will be providing COTS based solutions on EHR, HIS, Healthcare Analytics etc.	We assume the IHIP will act as a platform hosting various Products offered by OEMs who will address the requirements of EHR, Health Informatics, OPD/IPD, Blood Bank etc. with their commercial models attached for pay per use open to all health facilities in India. However there is no clarity on how the platform will select the products/services, will it be though empannelment? If so, will the OEMs be allowed to give list of partners/service providers? What would be the revenue model for the OEMs?	To be outlined as relevant at RFP stage
199	miscellaneous	Is mobility modules for ASHA/ANM is part of the solution envisaged?	Standardization and minimum qualification should be there for mobility framework for ASHA/ANM workers.	
200	miscellaneous		Will proponent be owning hosting hardware required or it would be owned by the department. Also would required additional input viz. Number of Citizines/ Patients / Clinical Staff for sizing the required hardware. Please clarify / elaborate	
201	miscellaneous		Department to decide information availability across all stakeholders to protect the patient information and the privacy of the patients records. Please clarify / elaborate.	Privacy & Security Reguation for Electronic Health Data is under formulation.
202	miscellaneous		*What is the process for the tender? Since this is EOI, would it be followed by detailed tender for the proponents who respond to the RFP?*	Yes
203	miscellaneous		*What are the timelines and budgets?*	Pls refer REOI
204	miscellaneous	Connectivety /Bandwidth	Please provide the connectivety details for among Hospitails, States and Central. Also provide the bandwidth claculation/sizing.	To be outlined as relevant at RFP stage
205	miscellaneous	Data Flow	Please provide the details how the data/infrmation flow between Hospitals, States and Central etc.	
206	miscellaneous		EOI will leads to closed RFP. Is our understanding correct?	Yes, as of now
207	miscellaneous		What is estimated budget?	NA

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S.No	Clause of REOI	Clause Description	Query	Clarifications from CHI
208	miscellaneous		HIE is the ultimate heterogeneous environment with slow adoption rate. Globally HIE roadmap is still evolving. At the same time Patients and citizens expect a seamless experience. In India, basic heathcare ICT initiatives e.g. HIS, LIMS, PACS etc are getting implemented at its own pace. Keeping in view this, how do we plan to rollout? And what are the acceptance criterias envisaged for?	To be outlined as relevant at RFP stage
209	miscellaneous		Who will be held responsible for data authenticity and accuracy?	Under Proponent scope. Details to be provided at RFP stage
210	miscellaneous		Is the vendor responsible for cleansing the data from various data sources?	Yes
211	miscellaneous		Is the vendor responsible for converting the data from various sources into a standardized format for use on the IHIP?	yes
212	miscellaneous		What is the work location? Can the company/ consortium members work out their offices?	To be outlined at RFP stage
213	miscellaneous		What is the planned timeline for RFP release and project initiation?	would be shared later
214	miscellaneous		Can a company/ consortium member participate in the tender without responding to this REOI?	No, as of now
215	miscellaneous		Does the company/consortium members need to provide hardware.	No
216	miscellaneous		What is the expected scale that this platform needs to handle (number of hospitals, number of patients, public health centers, etc.)	To be outlined as relevant at RFP stage
217	miscellaneous		Does the Ministry have the list of these third parties – do they exist already or they will build these systems only after the IHIP is in place?	
218	miscellaneous		": This is open ended. Any standard that needs to be complied with should be explicitly mentioned so that the SIs can verify compliance.	
219	miscellaneous		What about existing mobile apps like Anmol?	
220	miscellaneous		Is the plan for 3rd parties to write new apps against published APIs?	
221	miscellaneous		Whose responsibility is the field deployment?	
222	miscellaneous		How will field issues be filtered and appropriately escalated up?	
223	miscellaneous		Is the platform expected to support localization ?	
224	miscellaneous		What are the deployment, infrastructure management requirements?	
225	miscellaneous		It is recommended that prices shall be tax exclusive only and taxes shall be payable @ rates prevailing on the date of invoicing.	
226	miscellaneous		Credit Period is nowhere given in RFP.	
227	miscellaneous		It is recommended to pay the invoices raised by TCS within 30 days of receipt of invoices, failing which interest @ 2% per month shall be charged.	
228	miscellaneous		There is no clause for transfer of ownership for H/W & S/W to customer.	
229	miscellaneous		It is recommended that ownership of H/W, S/W and equipments shall be transferred to customer upon delivery.	
230	miscellaneous		Please confirm Is there any requirement to supply bandwidth under the scope of this tender? If yes, it is recommended to exclude bandwidth from the scope as TCS can't sell the same.	
231	miscellaneous		There is no exit management clause, The same needs to be added.	
232	miscellaneous		There is no termination clause, The same needs to be added.	
233	miscellaneous		There is no liquidated damages clause. The same needs to be added.	
234	miscellaneous		There is no limitation of liability clause, The same needs to be added.	
235	miscellaneous		There is no limitation of liability clause, The same needs to be added.	
236	miscellaneous		Is the project a Build Operate and Own (BOO) or a Build Operate Own and Transfer (BOOT) type of project, provide some clarity?	
237	17.5.1	The Company / Consortium Members (in case of consortium) should be an entity registered in India under the Company Act, 1956 (or) a firm registered under the Limited Liability Partnership Act, 2008 (or) a firm registered under the Partnership Act, 1932 for last 5 years as on 31st March, 2016, and must have a registered office in India which should be in operation as on 31st March, 2016 In case of a consortium, the Lead Proponent would need to submit an agreement with the other members of consortium for the contract clearly indicating the division of work and their relationship.	"The global companies registered outside India should be allowed to participate, however Lead consortium member should be a Indian company. The companies registered as per companies act 1956 should be aloowed to participate. The bidder company should be in operations for last 05 years from the date of bid submission"	Please refer corrgendum 1
238			Modification Suggested: The Company / Consortium Members (in case of consortium) should be an entity registered under the Limited Liability Partnership Act, 2008 (or) a firm registered under the Partnership Act, 1932 for last 5 years as on 31st March, 2016, and any member of the consortium must have a registered office in India which should be in operation as on 31 March, 2016 In case of a consortium, the Lead Proponent would need to submit an agreement with the other members of consortium for the contract clearly indicating the division of work and their relationship. In case any of the consortium member are of registered outside India, then they have to give an undertaking that they will open the project office in India after winning the project.	
239			Request allow entity registered in India or any other country and registered in respective country in the respective equivalent act	
240	17.5.2	The Proponent (Company/Consortium) must have a proven capability in design, development, integration, implementation, operations and maintenance of "Live" HIE systems and Healthcare Solutions (i.e. HIS, EMR, EHR) across large hospitals/healthcare facilities or networks of hospitals/healthcare facilities and should be handling/managing database of atleast 1,00,000 unique patient records (in format as per the EHR Standards and being compatible for aggregation, semantic interoperability etc.) as on date of submission of EOI. The HIE System should be for exchange between two or more disparate databases (HIS) of hospitals/networks of hospitals and should be capable of high volume exchange of data, image etc. For HIE capability purposes, application for exchange of data/records only within a network/chain/group of associated hospitals/ healthcare service providers or on a single database shall not be considered. Satisfactory Completion of Works Certificates from the client(s) confirming the year of work, scope of work and work order details; OR Work Order + Phase Completion Certificate from the client(s) for the ongoing "Live" projects with their scope of work	we proposed that companies would have experience handling 3 million records or more records	Please refer corrgendum 1
241			We feel that these kind of HIE's projects have not happned in the country, which have large transactions.	
242			Request you to please change the clause to the following *"The Proponent (Company/Consortium) must have a proven capability in design, development, integration, implementation, operations and maintenance of Healthcare Solutions (i.e. HIS, EMR, EHR) across large hospitals/healthcare facilities or networks of hospitals/healthcare facilities and should be handling/managing database of atleast 1,00,000 unique patient records (in format as per the EHR Standards and being compatible for aggregation, semantic interoperability etc.) as on date of submission of EOI"*	
243			Request you to modify the criteria from having HIE system to any HMIS/Heath solution to Hospitals. Also the requirement of handling of Patient records/Database should be reduced to 50,000.	Please refer corrgendum 1
244			We would therefore request you to kindly relax the criteria to patients records under EMR or Hospital Management Information System or experience of any other eHealth system with interoperability and aggregation feature.	
245			Healthcare Solution Providers (HIS / EMR / EHR) also have adequate experience in the similar scope of work as defined in the REOI. Also Healthcare Solution Providers have designed solutions for integration of diveresed databases and programming platform. Request you to amend the clause and allow more participation.	
246			The Proponent (Company/Consortium) must have a proven capability in design, development, integration, implementation, operations and maintenance of "Live" HIE systems **OR** Healthcare Solutions (i.e. HIS, EMR, EHR) across large hospitals/healthcare facilities or networks of hospitals/healthcare facilities and should be handling/managing database of atleast 1,00,000 unique patient records (in format as per the EHR Standards and being compatible for aggregation, semantic interoperability etc.) as on date of submission of EOI.	Please refer corrgendum 1

Reply to Queries **Date: 16-Sep-2017**

Request for Expression of Interest (REOI) for "Design, Development, Integration, Deployment, Implementation and Maintenance of Integrated Health Information Platform (IHIP)
Centre For Health Informatics, NIHFW, Ministry of Health and Family Welfare

S.No	Clause of REOI	Clause Description	Query	Clarifications from CHI
247			A company having different Information systems (like LIS, HIS etc), across different divisions under the same roof, and with the experience as provided in the document, would that company be eligible for RFP stage and as a proponent for this platform?	
248			Phase completion certificate might not be present in all engagements and hence would request you to change it to 'Work order' only.	
249			In lieu of work order, request consideration of Company Secrtary signed certificate validating the said values and details. Since as per NDA we sign with customers, we are barred from sharing work orders	
250			The Company/Lead Proponent (in case of Consortium) must be awarded a single project of atleast Rs.30 Crore (excluding hardware) in design, development, integration, implementation, operations and maintenance of HIE or Healthcare Solutions (i.e. HIS, EMR, EHR) in last five years.	Please refer corrgendum 1
251			The global experience of either consortium partner should be considered instead of lead biddder as stated in Clause no 17.5(ii)	
252	17.5.3	The Company / Lead Proponent (in case of Consortium) must have executed a single project of total value atleast Rs.30 Crore (excluding hardware) in design, development, integration, implementation, operations and maintenance of HIE or Healthcare Solutions (i.e. HIS, EMR, EHR) in last five years.	Requested to amend the clause	Please refer corrgendum 1
253			Request for Relaxation to b***e 20 crore***	
254			**Request to Amend clause by adding *IT enabled systems covering application development, system integration, data integration, data warehousing and data management project in last five years.***	
255			Request for Relaxation to b***e 5 crore***	Please refer corrgendum 1
256			Would request you to modify this clause to state 'The Company/consortia should have experience in implementation of single project of total value at least 30 crore in design, development, implementation and maintenance of HIS or healthcare solution in last five years. This clause may please be open for both Consortia members.	
257			Request to amend the clause.:- The Company/Lead Proponent (in case of Consortium) must have a single order of total value atleast Rs.30 Crore in Healthcare Solutions (i.e. HIS, EMR, HER - including hardware) in last five years.	
258	17.5.4	The Company / Lead Proponent of consortium should have Positive Net Worth as on 31st March 2016	The Company / Lead Proponent of consortium should **have Positive Net Worth** and be profit making as on 31st March 2016 for the last 3 yrs	Please refer corrgendum 1
259			To add : The company/ prime bidder in case of consortium should be a profitable entity with a profit o***f INR 10 Cr. i***n each of the last 3 Financial years (2013-14, 2014-15, 2015-16). To ensure working capital is not a challenge for bidding entity	
260	17.5.5	Average annual turnover of the Company/ Lead Proponent of consortium during the last three financial years 2013-14, 2014-15, 2015-16 from below mentioned Health-IT business streams (excluding turnover from hardware) should be at least Rs.30 Crore (as per the published Income Statement): 1)Health information exchange system, 2) Hospital/Healthcare Management Information 3) IT enabled System enabled systems covering data integration, data warehousing and data management. In case of consortium, average annual turnover of each of the non-lead members during the last three financial years 2013-14, 2014-15, 2015-16 from the above mentioned Health-IT business streams (excluding turnover from hardware) should be at least Rs.10 Crore (as per the published Income Statement).In case of calendar year, 3 years up to December 2015 would be taken in to account. Certificate from statutory auditor appointed by the company (of last 3 Financial Years (2013-14; 2014 – 15; 2015 – 16)	average annual turnover of Lead Proponent / consortium member during the last three financial years 2013-14, 2014-15, 2015-16 from the below mentioned Health-IT business streams (excluding turnover from hardware) should be at least Rs.5 Crore (as per the published Income Statement).	
261			Request to consider Annual average turnover from IT business stream, as work of IT infrastructure is common across all streams.	Please refer corrgendum 1
262			It is recommended to accept annual report or CA certificate in lieu of SA certificate	
263			Request to lower the eligibility criterion for all the consortium members, the minimum annual turn over to 5 cr	
264			Would request you please change the clause to state as: Average Annual turnover of the company/Lead proponent of consortium during the last three financial years 2013-14, 2014-15,2015-16 from below mentioned Health and IT business stream should be atleast Rs. 30 crores: A. Health Information Exchange System;or B. Hospital/Healthcare Management Information System;or C**. Government ICT systems.**	Please refer corrgendum 1
265			Modification: In case of consortium, ***total annual turnover*** of each of the non-lead members during the last three financial years 2013-14, 2014-15, 2015-16 from the above mentioned Health-IT business streams should be at least Rs.10 Crore .	
266			Requested to amend the clause as "Average annual turnover of the Company/ Lead Proponent of consortium during the last three financial years 2013-14, 2014-15, 2015-16 from ***IT/IT-Healthcare/Software Development.*** In case of consortium, average annual turnover of each of the non-lead members during the last three financial years 2013-14, 2014-15, 2015-16 from ***IT/IT-Healthcare/Software Development*** should be at least Rs.10 Crore (as per the published Income Statement). In case of calendar year, 3 years up to December 2015 would be taken in to account".	
267			Request for relaxation in ***Average annual turnover of Company/Lead proponent to 20 crore***	Please refer corrgendum 1
268			Request for relaxation in ***Average annual turnover of Consortium/non lead members to Rs.10 Crore.***	
269			Average annual turnover of the Company/ Lead Proponent of consortium during the last three financi should be at least **Rs.150 Cror**e	
270			Request for relaxation in ***Average annual turnover of Consortium/non lead members to Rs.3 Crore.***	Please refer corrgendum 1
271			Request you to please change the clause to the following "Average annual turnover of the Company/ Lead Proponent of consortium during the last three financial years 2013-14, 2014-15, 2015-16 ***from IT and ITes*** **least** Rs.30 Crore (as per the published Income Statement)"	
272			Request for relaxation in ***Average annual turnover of Company/Lead proponent to 10 crore***	
273			Stated specific service lines turnover calculation is not possible as we our overall healthcare & lifesciences practice accounts for about 5% of our $4 Billion turnover, can we please update the clause to show "Annual Healthcare IT services turnover"	Please refer corrgendum 1
274			Request for relaxation in ***Average annual turnover of Company/Lead proponent to 5 crore***	
275			Request you to please consider Certificate from chartered accountant/ company secretary (of last 3 Financial Years (2013-14; 2014 – 15; 2015 – 16). Request to accept CA/CS letter instead of statutory auditor certificate	
276	15.5.6	The Company / Consortium Members should have a valid Service Tax Registration and Income Tax returns and PAN card	Consortium members registered outside India should be given a waiver for this clause.	Please refer corrgendum 1
277	17.5.7	The Company / Consortium Members should not be under a declaration of ineligibility for corrupt and fraudulent practices issued by any of the Central or State Government Ministries / Departments, and should not have violated / infringed upon any Indian or foreign trademark, patent, registered design or other intellectual property rights	The Company / Consortium Members should not be under a declaration of ineligibility for corrupt and fraudulent practices issued by any of the Central or State Government Ministries / Departments, ~~and should not have violated / infringed upon any Indian or foreign trademark, patent, registered design or other intellectual property rights~~	
278	17.5.8	The Company/ Consortium Members should be a CMMI Level 5 certified.	Request to relax the CMMi level 5 certification	Please refer corrgendum 1
279			The Company/ Consortium Members should be a ***CMMI Level 5 certified or ISO 9001 and 27001.***	
280			Requested to amend the clause as "The Company/ Consortium Members should be a **CMMI Level 3 certified or above"**.	
281			We will recommend to append to this clause	
282			The Company/ Consortium Members ***should be certified by internationally certifying agency like ONGC of USA or equivalen***t.	Please refer corrgendum 1
283			Can the company/ consortium members have any other certifications like ISO 9001 in lieu of CMMI Level 5?	
284			**Request to kindly remove the clause**	

Fourth Dimension Solutions©
Innovation, Efficiency, Execution

Ref : FDSL/NIHFW/213/2016-17
Date :21st September 2016

Project Director, CHI
National Institute of Health and Family Welfare
Baba Gang Nath Marg, Munirka,
New Delhi -110067

Sub: Request for amendment

Reference: Corrigendum 1 issued on 16th September 2016

EOI Reference: Request for Expression of interest (REOI) for" Design, Development, Integration, Deployment, Implementation and Maintenance of Integrated Health Information Platform (IHIP)

Dear Sir,

Reference to the subject matter and above mentioned RFP for the Design and development of IHIP system would request for amendments as per our earlier request sent dated 09th September 2016, followed by discussion during the pre-bid conference called on 10th September in your good office.

We wish to inform you that most of the points regarding the eligibility criteria regarding the lead bidders and consortium members are not very encouraging. We have raised the points during the pre-bid meeting and were assured same would be simplified for participation of contenders considering to bid the prestigious project.

We would once request you to consider our request for the generalization of the eligibility criterion enabling us to participate in the bid.

Thanking you,

Yours sincerely,
For **Fourth Dimension Solutions Ltd.,**

FOURTH DIMENSION SOLUTIONS LIMITED NEW DELHI

Vaibhav Chandhiok
GM-Sales
Mob. 7042392513

Gmail Amit Kumar <amitkumariss34@gmail.com>

Fwd: Request for consideration of Oracle Direct Response-IHIP EOI

1 message

Manpreet.singh Sidhu <manpreet.singh@nisg.org> Wed, Sep 28, 2016 at 5:18 PM
To: amitkumariss34@gmail.com

FYI

From: "Ankit Tripathi" <at@nihfw.org>
To: "manpreet singh" <manpreet.singh@nisg.org>
Sent: Wednesday, September 28, 2016 5:02:54 PM
Subject: Fw: Request for consideration of Oracle Direct Response-IHIP EOI

FYI.

From: Shayanika Hazarika <shayanika.hazarika@oracle.com>
Sent: 26 September 2016 12:12
To: supten@nihfw.org; at@nihfw.org
Cc: sunil.sharma62@gov.in; Jitendra Arora; Puneet Walia; Santhosh Francis
Subject: Request for consideration of Oracle Direct Response-IHIP EOI

Dear Prof. Supten and Ankit ,
Greetings!!
I take this opportunity to introduce myself, Shayanika part of Oracle Health Sciences division and leading the Healthcare Business Development in South Asia region.
Oracle has been investing significantly through research and development to provide best in class solutions like Healthcare Information Exchange in healthcare space. As a result of this Oracle solutions have been selected by over 30 HIE projects across the world including many national level projects. Some of the national level projects are;

1) Singapore National Electronic Health Record(NEHR)
2) Australia Patient Electronic Health Record(PEHR)
3) Brazil covering 200 million population

At the stage of EOI we understand that CHI is evaluating the IHIP platform OEM vendors and system integrators to implement the solution.

We believe that at the EOI stage you may want to first evaluate the leading HIE solutions in the world hence Oracle would like to directly submit the EOI response to demonstrate the capabilities of our HIE platform.
The EOI document has a specific mention of the pre-qualification criteria such as CMMI level 5 and other SI specific qualification criteria which cannot be met by product vendors such as Oracle. For the above mentioned national level projects we had an SI front ending and we have provided Oracle resources/experts to work with SIs to ensure successful delivery of the projects.
We strongly believe that restricting the EOI to SI only will limit your selection to SI vendor who might not have vast experience of national level project. At the stage of EOI we would like to recommend CHI to evaluate the solutions that have been implemented nationally and are scalable to meet critical requirements.
You may want to consider a system integrator to implement the software, hardware, roll out and maintenance of the IHIP platform during the RFP phase. As you may be aware many of the large SI's are already an Oracle partner and we

will work with them to submit the response during the RFP phase along with Oracle Health sciences consulting that brings in niche HIE implementation experience globally.

We believe this would provide CHI comprehensive list of SI's as well as industry leading products such as Oracle HIE. Hence we would request you not to reject our direct response due to non-availability of SI specific pre-qualification criteria's and provide an opportunity to present our solution portfolio.

Thanks & Regards,
Shayanika

--

ORACLE

Shayanika Hazarika | Senior Business Development Manager-South Asia
Phone: +911246226792 | Mobile: +919632488998
Oracle Health Science Global Business Unit

Oracle India | One Horizon Center, Golf Course Rd, Dlf Phase 5 | 122003 Gurgaon

Receipt No : 370052/2016/E-GOV

Gmail Amit Kumar <amitkumariss34@gmail.com>

Fwd: EOI for IHIP - Request for Extension of submission date

1 message

Manpreet.singh Sidhu <manpreet.singh@nisg.org> Wed, Sep 28, 2016 at 5:18 PM
To: amitkumariss34@gmail.com

FYI

From: "Prof. Supten Sarbadhikari" <supten@gmail.com>
To: "Suptendra Nath" <s.n.sarbadhikari@nic.in>, "manpreet singh" <manpreet.singh@nisg.org>
Sent: Wednesday, September 28, 2016 4:18:33 PM
Subject: Fwd: EOI for IHIP - Request for Extension of submission date

---------- Forwarded message ----------
From: **Dhadwal, Sanjay Kumar** <sdhadwal@csc.com>
Date: Wed, Sep 28, 2016 at 12:36 PM
Subject: EOI for IHIP - Request for Extension of submission date
To: "supten@nihfw.org" <supten@nihfw.org>
Cc: "at@nihfw.org" <at@nihfw.org>, "Jain, Amit P" <ajain291@csc.com>

To,

Prof. Suptendra Nath Sarbadhikari,

The Project Director,

Center for Informatics,

National Institute of Health & Family Welfare,

Baba Gangnath Marg,

Munirka,

New Delhi – 110067.

Subject – Expression of Interest for the Integration Health Information Platform: Request for Extention of Submission Date

Dear Sir,

This is with reference to your EOI for IHIP dated 24 August 2016. We are very keen to participate in the REOI but due to short of time unable to submit the response on 30 September 2016.

Therefore, requesting your kind help to **extend the submission date by at least 3 weeks**.

Computer Sciences Corporation (CSC) is a global leader of next generation information technology (IT) services and solutions since 1959. CSC's mission is to enable superior returns on our clients' technology investments through best-in-class industry solutions, domain expertise and global scale. CSC has approximately 56,000 employees serving clients at 60+ countries.

CSC is a global leader of healthcare technology solutions serving 8,000+ public and private sector healthcare clients globally. CSC provides solutions to address your challenges and improve care coordination, safety and compliance and operational efficiency.

Some of our clients in India are reputed healthcare chains like: Medanta – the Medicity, Artemis Hospital, Kokilaben Dhirubhai Ambani Hospital, Satya Sai Hospital, etc. Our global customers in government are: Ministry of Health – Malaysia, Brunei, Oman, Limpopo Province in South Africa, etc., and in private are: Siriraj Hospital Bangkok, Sikarin Hospital Thailand, Ain Al Khaleej Hospital UAE, King Abdulla University Hospital Jordan, etc.

Requesting your kind help to extend the submission date by at least 3 weeks.

Regards,

Sanjay Dhadwal

Healthcare Sales

CSC Technologies India Pvt. Ltd.

Galaxy Business Center,

Sector – 62,

Noida – 201301.

Cell: +91 783 8800 712

Gmail Amit Kumar <amitkumariss34@gmail.com>

Fwd: Kind Attn: Shri Ankit Tripathi Cc: Prof.Suptendra Nath Sarbadhikari

1 message

Manpreet.singh Sidhu <manpreet.singh@nisg.org> Wed, Sep 28, 2016 at 5:19 PM
To: amitkumariss34@gmail.com

FYI

From: "Prof. Supten Sarbadhikari" <supten@gmail.com>
To: "Suptendra Nath" <s.n.sarbadhikari@nic.in>, "manpreet singh" <manpreet.singh@nisg.org>
Sent: Wednesday, September 28, 2016 4:19:31 PM
Subject: Fwd: Kind Attn: Shri Ankit Tripathi Cc: Prof.Suptendra Nath Sarbadhikari

---------- Forwarded message ----------
From: **Dr Madhu Nambiar , SRIT** <madhu@renaissance-it.com>
Date: Tue, Sep 27, 2016 at 7:25 PM
Subject: Kind Attn: Shri Ankit Tripathi Cc: Prof.Suptendra Nath Sarbadhikari
To: at@nihfw.org
Cc: supten@nihfw.org, "Sharad Kothari , SRIT" <sharad.kothari@renaissance-it.com>

For the kind attention of Sh. Ankit Tripathi, Additional Director CHI

Cc: Prof. Suptendra Nath Sarbadhikari, Project Director CHI

Response to EOI (REOI), IHIP , Request for extension of submission date by few days

Respected Sir,

SRIT (India) Private Limited, a 17 year old Indian Health Systems, CMMI Level 5 company is participating your IHIP as the Lead Consortium Partner Proponent in consortium with one of the Big-4 as well as an American Fortune 500 HIE corporation. SRIT, the oldest Indian health systems player has implemented eHealth and mHealth in 12 countries including India and America. In India, SRIT is implementing state-wide health systems. SRIT does healthcare IT management of 257 hospitals, 1572 dispensaries/clinics and 475 directorates in India.

We would be much grateful if you would kindly **extend the submission date for the REOI by few days**. In anticipation of your help and co-operation, I remain,

Sincerely, Madhu

Cc: Sharad Kothari, Executive Director

Receipt No : 370052/2016/E-GOV

Dr.Madhu Nambiar | Chairman & Managing Director | **Office:** +91 80 4195 1999 Extn: 1515 | **Mobile:** +91 98450 69510 | **URL:** www.renaissance-it.com

Respected sir,

Request you to consider the following changes in the REOI for "Design, Development, Integration, Deployment, Implementation and Maintenance of Integrated Health Information Platform (IHIP)".

Clause No. of REOI	Clause Description as per REOI and Corrigendum	Requested change	Rationale
17.5.8	The Company/ Lead Proponent (in case of consortium) should be a CMMI Level 5 certified.	The Company/ **any of the** Consortium Members should be a CMMI Level 5 certified. **Credentials of similar projects, certifications, work orders, other capabilities, etc. of all consortium members shall be considered for evaluation and should not be evaluated in isolation.**	We request you to retain the clause as in the original REOI. This will enable formation of robust consortia and partners with multiple skill sets will be able to value add and create a long-term solution
3.1.4	Last date for Submission of REOI Response is 30.09.2016	Last date for Submission of REOI Response is **14.10.2016**	We request you to extend the last date of submission in order to formulate robust consortia and to clearly indicate clear roles and responsibilities of each member
17.5.4, 17.5.5 and 17.5.6	…… as on 31st March 2016	….. as on 31st March 2016. **In case results for 2015-16 are not published till the last date for submission of REOI response, 2014-15 shall be accepted. However, the Company / Lead Proponent shall furnish the same at the time of RFP**.	Since company audits will be going on till October 2016, we request you to consider 2014-15 financials (net positive worth, turnover, IT returns, etc.). At the time of RFP, 2015-16 financials shall be mandatory
17.5.2	…… and should be handling/ managing database of at least 1,00,000 unique patient records ……	…… And should be **connected to more than 2000 facilities** and handling/ managing database of at least **10,00,000** unique patients records ……	The pilot phase needs to be implemented across 2 states and in order to build a robust solution, it would be advisable to have patient records of at least a million patients across 2000 facilities. This will help in getting responses from players that can implement HIE on a

			pan-India basis as compared to small countries with uniform databases.
Annexure 1 – Healthcare Provider Stakeholder	• Availability of real time and standardised data/information • Optimal information exchange to support better health outcome • Better decision support system • Fewer redundancies and medical errors	In addition to the mentioned outcomes/benefits, the following should be added: • Patient encounter management • Claim generation and management	This will help in strong linkage of health insurance schemes, public such as RSBY and private health insurance; and reduce the turnaround time for claim processing
Annexure 1 – Payers Stakeholder	• Better and smoother management of billing and claims processes • Enhanced precision and speed of coverage payments to healthcare service • Better analysis of cost-effectiveness of coverage policies • Business intelligence and more sophisticated data analysis towards better coverage policies planning etc.	In addition to the mentioned outcomes/benefits, the following should be added: • Standard health language (standard codes) • Standard communication schema • Business and validation rules • Process and data flow • Documentation, circulars, manuals, releases • Communicate transactions, monitor and manage transactions, etc. • Comprehensive registry of drugs • Control releases and updates • Integration with international drug decision support system	This will help in strong linkage of health insurance schemes, public such as RSBY and private health insurance; and reduce the turnaround time for claim processing This will also improve revenue generation and reduce time to reach sustainability for the HIE platform

Yours sincerely,

Lokesh Sharma
Head – Government Solutions
IMS Health Information and Consulting Services India Pvt. Ltd.
Mobile: +91 98717 76667, E-mail: lokesh.sharma@in.imshealth.com

F.No.11013/4/2016-eGov
Government of India
Ministry of Health & Family Welfare
Department of Health & Family Welfare
(eHealth Division)
*****

Nirman Bhawan, New Delhi
Dated : 28th September 2016

To

The Project Director,
Centre for Health Informatics of NHP,
National Institute of Health & Family Welfare
Munirka, New Delhi.

Subject : Extension of last date of submission of REoI for "Setting-up of Integrated Health Information Platform (IHIP)"

Sir,

I am directed to inform you that last date of submission of REoI for "Setting-up of Integrated Health Information Platform (IHIP)" has been extended upto 7th October 2016.

2. Therefore, you are requested to publish the corrigendum in this regard.

3. This issues with approval of JS(eHealth), MoHFW

Yours sincerely,

28/9/16
(Amit Kumar)
Assistant Director (eGov)
MoHFW

(अमित कुमार)
(AMIT KUMAR)
सहायक निदेशक/Asstt Director
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
Ministry of Health & F.W.
भारत सरकार/Govt. of India
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Amitabha Bagchi

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Research Interests:
Structural properties of networks, wireless networks, random graphs and stochastic processes, social networks, data analytics, data structures.
I am part of the Data Analytics and Intelligence Research group at IIT Delhi.

Currently Teaching:

- **COL106**. Data Structures. I Sem, 2016-17

Previously Taught:

- **COL100 (formerly CSL101/CSL102)**. Introduction to Computers and Programming. I sem, 2014-15, II sem, 2011-12.
- **CSL102**. Introduction to Computer Science. II sem, 2010-11, I sem, 2009-10.
- **CSL105**. Discrete Mathematical Structures. I sem, 2005-06, I sem, 2006-07.
- **COL106 (formerly CSL201)**. Data Structures. I Sem, 2015-16, I sem 2012-13, I Sem, 2011-12, II sem, 2009-10, II sem, 2008-09, II sem, 2006-07.
- **CSL853**. Complexity Theory. II sem, 2005-06.
- **CSL857**. Randomized Algorithms. II sem, 2012-13.
- **CSL860**. Special topics in Parallel Computation.
  - Some stochastic processes on graphs. I Sem, 2010-11.
  - Routing in the Presence of Faults. I sem, 2008-09.
  - Theory of Network Communication. II sem, 2005-06.
- **CSL863**. Special topics in Theoretical Computer Science
  - The Mathematics of Data Science. II Sem, 2015-16.
  - Expander graphs and their applications. II sem, 2014-15.
  - Randomized Algorithms. II sem, 2007-08.
- **CSL866**. Special topics in Algorithms.
  - Percolation and Random Graphs. I sem, 2007-08.

Research Publications by year

Forthcoming

- Mona Gupta, Happy Mittal, Parag Singla and Amitabha Bagchi.
  Analysis and characterisation of comparison shopping behaviour in the mobile handset domain.

To appear in *Elec. Comm. Res.*
doi:10.1007/s10660-016-9226-7

2016

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doi:10.1007/s11276-015-1102-1

- Amit Ruhela, Amitabha Bagchi, Anirban Mahanti, Aaditeshwar Seth.
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2015

- Siddharth Bora, Harvineet Singh, Anirban Sen, Amitabha Bagchi, Parag Singla.
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  Characterizing comparison shopping behavior: A case study.
  Presented at *Workshop on Big Data Consumer Analytics (BDCA '14)*,
  Published in *IEEE 30th International Conference on Data Engineering Workshops (ICDEW 2014)*, pp 115-122, March 2014.
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2013

- Rudra Mohan Tripathy, Amitabha Bagchi and Mona Jain.
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  ESTHETE: A news browsing system to visualize the context and evolution of news stories,
  A Demo paper in *Proceedings of the 22nd ACM International Conference on Information and Knowledge Management (CIKM '13)*, pp 2529-2532, November 2013.
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Fwd: A committee to be set up for working on data format for IHIF

Amit Kumar
to me

---------- Forwarded message ----------

From: **chandrasen shrivastava** <chandra_works2001@yahoo.com>
Date: Tue, Nov 15, 2016 at 2:13 PM
Subject: A committee to be set up for working on data format for IHIP
To: Amit Kumar <amitkumariss34@gmail.com>, Amit Kumar <amit.k89@gov.in>
Cc: Sunil Sharma JS <sunil.sharma62@gov.in>, Jitendra Arora <dir.ehealth@gma

Dear Amitji,

As directed by JS today, a committee is to be set up with the following obj

"To outline elements and format for data to captured and collated by IHIP'

The suggested members would include:

- Spl. DGHS- Dr. Athani
- Shri Jitendra Arora , Dir. eGov, MoHFW
- Dr Deepak Agrawal, AIIMS Delhi
- Ms. Metilda, AIIMS Delhi
- Dr. Supten Sarbadhikari, PD, NHP
- Representative from CBHI, MoHFW
- any other member as deemed required

You are requested to kindly do the needful on file for constitution of the sa

Regards,
Chandrasen

Government of India
Department of Health & Family Welfare
eHealth Section
****

Minutes of the Workshop to Discuss and Outline Elements and Format for Data to Capture and Collected by Integrated Health Information Platform (IHIP)
(28th November, 2016, Nirman Bhawan, New Delhi)

A workshop was held under the chairpersonship Dr. B.D. Athani, Spl. DG, DGHS MoHFW to discuss and outline elements and format for data to be capture and collected by Integrated Health Information Platform (IHIP).

2. Shri Sunil Sharma, JS (eHealth), MoHFW welcomed the participants and briefed them regarding the envisaged objectives of and outputs expected from the workshop. He also briefly explained the key benefits of the IHIP. List of the participants is provided at Annexure-1.

3. Dr. B.D. Athani emphasized upon why interoperability and integration of different health IT Systems is required for clinical information, population health information as well as administrative information. He suggested that exchange of information is required at multiple levels such as - individual patient, hospital, administrative, state and national level for continuity of care and for public health decision making.

4. This was followed by a brief presentation on the IHIP covering various aspects such as objectives of the IHIP, functional scope, components, benefits, architecture, methods of data exchange, EHR development and implementation, scope, information to be captured in EHR, integration of public health information systems with IHIP, Minimum Data Set of the EHR standards 2013.

5. Thereafter, detailed discussion and deliberation was held and the following suggestions were made by the participants and based on those decisions were taken:

1. **Minimum Data Set (MDS)**:
    a. MoHFW may come up with the Essential Data Set (EDS) and all fields mentioned in the EHR Standard (2013) MDS list may not be required in the EDS. The other data elements which are important can be placed under as ‘nice to have’ list along with the MDS.
    b. It was also suggested that mandatory EDS should not become a reason for refusal of services but should be used proactively for getting minimal essential information into the system which could be used for data exchange.

c. For creation of MDS following suggestions were made-
    i. Discharge summaries of the patient may be used as minimum data set where limited but important data elements in the discharge summary could be indentified and used.
    ii. Following data elements were suggested under MDS- Patient Name, Father Name, Mother Name, DoB, Gender, Clinical Diagnosis, Prescription Parameters, Confirmed Diagnosis, Symptoms, Medication, Investigation, Tobacco and Alcohol abuse etc.
    iii. To start with only IPD data could be entered into the EHR. However, provisions would use to be made for entering OPD data as well into EHR.
    iv. OPD slip data elements may be used as minimum dataset for Outpatient visits.
    v. SNOMED CT should be used for entering patient symptoms
    vi. Laboratory & pharmacy departments may enter the lab test & medicine data directly into the EHR.
    vii. It was decided that IHIP will have the full fledged basic EHR from day one. During implementation IPD data entry would be prioritized and outpatient clinical records would be taken up later for entry into the system.

d. It was also discussed as to whether provisional diagnosis to be entered into EHR or confirmed diagnosis only. To this Dr. Athani responded that to start with, provisional diagnosis could be entered which can be later confirmed by the service provider when the test records are available. Suggestions also came regarding documentation of Tobacco and Alcohol abuse history of the patient which was supported by the participants.

2. **Use of Aadhar as Unique Health Identifier**:

a. It was suggested that the Aadhar number should be used in priority for the identification of the patient; in addition, provision for the use of additional IDs should be there till use of Aadhar becomes a norm.

b. JS (eGov) suggested that call centre initiatives of different programs should be used proactively to obtain/verify the Aadhar number of the patient and entered into the HIS/EHR systems.

c. It was decided that TB Division and Leprosy Division should share within a week, write-up on their IT Systems and use of Aadhar in respective systems.

3. **Integration of Public Health Information Systems with IHIP**:
    a. It was suggested that provisions should be made for sharing of clinical records between EHR systems and public health information systems such as Nikshay, MCTS etc. where clinical information is recorded.
    b. EHR/HIS system should be user friendly to operate and it should also be capable of aggregating community centric electronic health records.
4. **Capacity Building interventions:**
    a. It was suggested that a robust capacity building and change management program is to be created for the nurses, doctors and pharmacist and other paramedics of the hospital for using EHR systems.
    b. There may be pre-Induction training (of adequate duration) for all categories of the doctors and paramedics for usage of EHR system.
5. **National Drug Database**:
    a. It came out during the discussion that e-pharmacy and e-prescription would require to go hand in hand with EHR.
    b. For drug database, any of the well developed drug databases in private domain may be explored and evaluated for use in public domain.
6. **Patient to add/edit their data**- It was suggested that patient should be given flexibility to add/modify their own data into their records. It was considered that there would be editable and non-editable records of the patient, where editable records could be entered/edited by the patients- using this he can enter his own routine vital data such as Blood Pressure, Weight, Blood Sugar etc. Non-editable data would be entered by doctor/ medical service provider only and standard protocols would be required to put in place for its addition/ change. It was also suggested that patient could be given the flexibility for creating their personal health records which they can use to document their own details.
7. **Participation of the private sector**- Chairperson, Dr. Athani informed that, in phase-1 the private sector will be sensitized for digital management of patient records and would be motivated for sharing of clinical information in the later stages of the implementation. However the consultation with larger groups would be required in this regard. JS (eGov) suggested that the private sector may be brought onboard by three major ways:
    a. All hospitals/service providers participating in the NHPS must mandatorily follow the EHR standards and share data into the Minimum data set with other providers through IHIP.
    b. IRDA has been requested to get UID and patient level clinical data for all reimbursement purposes.

c. Facilities registered under Clinical Establishment Act may be required to provide data on the minimum data set and participate in the information sharing.

8. The committee has decided that in IHIP, Pull and Push mechanism will be used for data exchange.

9. It was decided to constitute a committee having composition as follows for detailed working on and finalisation of data elements and formats for IHIP, keeping in view the suggestions made during the workshop :

1.	Dr. Deepak Agarwal, Head Computerization, AIIMS	Chair
2.	Dr. S.K. Srivastava, Sr. Director, MeitY	Member
3.	Dr. Deepak Bhattacharya, Pulmonary & Respiratory Medicine, Safdarjung Hospital	Member
4.	DDG, TB Division, MoHFW	Member
5.	Dr. S.N Deshpande, RML Hospital	Member
6.	Shri Parveen Srivastava, Joint Director, C-DAC, Noida	Member
7.	Shri Gaur Sundar, iNRC SNOMED CT, CDAC Pune	Member
8.	IT Department Incharge, PGI, Chandigarh	Member
9.	Dr. S. B. Bhattacharya, TCS	Member
10.	Dr. Arvind Sivaramakrishnan, Apollo hospital	Member
11.	Dr Ashok Mittal, Practitioner Clinician	Special Invitee
12.	Shri Ankit Tripathi	Convenor

The Committee is mandated to submit in three weeks' time the draft report on data elements and formats to be captured and stored in form of central repository at IHIP in line with the objectives set out for establishment of IHIP.

10. Meeting ended with the vote of thanks to the chair.

Annexure- 1 List of Participants

S.No.	Name	Designation
1	Dr B.D. Athani	Spl. DG, MoHFW
2	Shri Sunil Sharma	Joint Secretary, e-GoV, MoHFW
3	Shri Praveen Srivastava	Joint Director, CDAC Noida
4	Shri R.C. Rawat	Social Scientist, NHM Rajasthan
5	Dr. SK Srivastava	Sr. Director, MeitY
6	Dr. SN Deshpande	HoD, Psychiatry, OIC, MRD, RML
7	Dr. Ajay Rampal	Sr. Tech Director, NIC, New Delhi
8	Dr. Deepak Agarwal	Chairman, Computerization, AIIMS
7	Ms. Metilda Robin	Head, Nursing Informatics, AIIMS
8	Shri Tarun Kumar Goel	Technical Director, NIC, HQ, New Delhi
9	Shri Ankit Tripathi	Additional Director, CHI
10	Shri Surinder Singh	MRO, MRD, RML

Note No. #1

05/05/2016 3:40 PM

AMIT KUMAR-AD
(AD)

Note No. #2

Subject: Constitution of Technical Evaluation Committee (TEC) for setting-up of Integrated Health Information Platform (IHIP).

This is in reference to the setting-up of the Integrated Health Information Platform (IHIP) and selection of the service provider for Health IT solutions by publishing the Request for Expression of Interest (REOI) document.

2. Centre for Health Informatics (CHI) setup by MoHFW has been mandated to administer the development and implementation of IHIP. It has been already approved to register CHI as a 'Society' (National Centre for Health Informatics) under MoHFW. A draft REOI, prepared and submitted by CHI, has been put up for approval of Secretary(HFW).

3. To complete the process of selection of an agency, it is proposed that a Technical Evaluation Committee (TEC) may be constituted at CHI, NIHFW, and with following Term of References (ToRs) :

- Review, evaluate and finalize the REOI and RFP documents.
- Technical review of the eligibility of participating agencies and short listing of eligible agencies to whom RFP document would be issued.
- Participate in the pre-bid meeting and clarify queries and observations of the agencies.
- Laying down criteria for technical evaluation of the bids/proposals (in line with the Detail Project Report (DPR) of Health MMP approved by MoHFW).
- Evaluation of the bids/proposals received in line with the technical evaluation criteria approved.

4. Composition of Technical Evaluation Committee (TEC) is proposed as follows:-

- Sh. Sunil Sharma - JS (e-Gov), MoHFW - Chairman
- Dr. Deepak Agarwal - Chairman Computerization, AIIMS
- Dr. C. Jayan - Joint Director, e-Health, Kerala
- Representative - Govt. of Gujarat

- Representative - Govt. of Tamil Nadu
- Sh. Vinay Thakur - Director, NeGD, DeitY
- Dr. Abhimanyu Panda - Dy. Med. Commissioner, ESIC
- Prof. Suptendra Nath Sarbadhikari - Project Director, CHI, NIHFW
- Shri S.K. Sinha - STD, NIC, MoHFW
- Shri Ankit Tripathi - Additional Director, CHI, NIHFW
- Shri Jitendra Arora (Member Convenor) - Director (e-Gov), MoHFW

5. File is submitted for seeking approval of Secretary (HFW) for constitution of Technical Evaluation Committee (TEC) with aforementioned composition.

27/07/2016 1:50 PM

AMIT KUMAR-AD
(AD)

Note No. #3

We may also include following:

1. Dr. K. R Murli Mohan, Department of Science & Technology.

2. Special invitee(s) as decided by chairman.

04/08/2016 6:26 PM

JITENDRA ARORA
(DIR)

Note No. #4

Having members from different states on the committee may unnecessarily complicate the process of evaluation.

Put up the matter for finalization of EOI urgently.

The matter re constitution of the committee may be put up later.

10/08/2016 11:31 AM

SUNIL SHARMA
(JS)

Note No. #5

The Draft REoI for "Design, Development, Implementation, Integration, Deployment and Maintenance of Integrated Health Information Platform (IHIP)" is placed for approval (pg 60 to 103/ c).

10/08/2016 11:47 AM

JITENDRA ARORA
(DIR)

Note No. #6

Pl resubmit after revising the EOI as discussed.

12/08/2016 1:20 PM

SUNIL SHARMA
(JS)

Note No. #7

As discussed, the revised draft EoI for IHIP is placed for kind approval (P.C/106-148) please. Also, a composition of proposed TEC members is placed below:-

- Sh. Sunil Sharma - JS (e-Gov), MoHFW - Chairman
- Dr. Deepak Agarwal - Chairman Computerization, AIIMS
- Dr. C. Jayan - Joint Director, e-Health, Kerala
- Sh. Vinay Thakur - Director, NeGD, DeitY
- An Expert on Big Data Analytics, Department of Science & Technology
- An Expert from IIT, New Delhi
- Shri Gaur Sunder, PTO, C-DAC, Pune
- Prof. Suptendra Nath Sarbadhikari - Project Director, CHI, NIHFW
- Shri S.K. Sinha - STD, NIC, MoHFW
- Shri Ankit Tripathi - Additional Director, CHI, NIHFW
- Shri Jitendra Arora (Member Convenor) - Director (e-Gov), MoHFW

16/08/2016 12:38 PM

JITENDRA ARORA
(DIR)

Note No. #8

Pl firm up on the names of experts and resubmit as discussed. We may consider taking expert from IIT, any NIT or DCE.

17/08/2016 10:51 AM

SUNIL SHARMA
(JS)

Note No. #9

As discussed, the revised draft EoI for IHIP is placed for kind approval (P.C/106-148) please. Also, a composition of proposed TEC members is placed below:-
1. Sh. Sunil Sharma - JS (e-Gov), MoHFW -- **Chairman**
2. Dr. Deepak Agarwal - Additional Professor Neurosurgery Chairman Computerization, AIIMS
3. Dr. C. Jayan - Joint Director, e-Health, Kerala
4. Sh. Vinay Thakur - Director, NeGD, DeitY
5. An Expert on Big Data Analytics
6. An Expert from regional Information Technology and Communication Institutes.
7. Shri Gaur Sunder, PTO, C-DAC, Pune
8. Prof. Suptendra Nath Sarbadhikari - Project Director, CHI, NIHFW
9. Shri S.K. Sinha - STD, NIC, MoHFW
10. Shri Ankit Tripathi - Additional Director, CHI, NIHFW
11. Shri Jitendra Arora, Director (e-Gov), MoHFW -- **Member Convenor**

18/08/2016 10:08 AM

JITENDRA ARORA
(DIR)

Note No. #10

make item 6 more broad based as discussed so that there is no difficulty in getting a domain expert on board.

19/08/2016 1:09 PM

SUNIL SHARMA
(JS)

Note No. #11

As discussed, the revised draft EoI for IHIP is placed for kind approval (P.C/106-148) please. Also, a composition of proposed TEC members is placed below:-
1. Sh. Sunil Sharma - JS (e-Gov), MoHFW -- **Chairman**
2. Dr. Deepak Agarwal - Additional Professor Neurosurgery Chairman Computerization, AIIMS
3. Dr. C. Jayan - Joint Director, e-Health, Kerala
4. Sh. Vinay Thakur - Director, NeGD, DeitY

5. An Expert on Big Data Analytics
6. An ICT expert from IIT/NIT/regional engineering institutes/ Management institutes of prominence.
7. Shri Gaur Sunder, PTO, C-DAC, Pune
8. Prof. Suptendra Nath Sarbadhikari - Project Director, CHI, NIHFW
9. Shri S.K. Sinha - STD, NIC, MoHFW
10. Shri Ankit Tripathi - Additional Director, CHI, NIHFW
11. Shri Jitendra Arora, Director (e-Gov), MoHFW -- **Member Convenor**

19/08/2016 1:32 PM

JITENDRA ARORA
(DIR)

Note No. #12

Approved.

19/08/2016 1:58 PM

SUNIL SHARMA
(JS)

Note No. #13

19/08/2016 2:18 PM

JITENDRA ARORA
(DIR)

Note No. #14

Approval of Hon'ble HFM For Setting up of IHIP.pdf

30/08/2016 3:44 PM

AMIT KUMAR-AD
(AD)

Note No. #15

16/09/2016 11:04 AM

AMIT KUMAR-AD
(AD)

Note No. #16

Subject: Request for extension of last date of submission of REoI for "Setting-up of Integrated Health Information Platform (IHIP)"

This is in reference to the **Request for Expression of Interest (REoI)** released on 24th August, 2016 for shortlisting the Agencies to "Design, Develop, Implement, Integrate, Deploy and Maintain" the envisaged **Integrated Health Information Platform (IHIP)**. The last date for submission of responses to the REoI will be on 30th September, 2016

2. CHI organized a pre-bid meeting of TEC of REoI with various agencies on 10.09.2016 under the chairmanship of JS (eGov), MoHFW and based on the recommendation of TEC a corrigendum-1 was published on 16th September, 2016.

3. In this regard, various requests through email have been received for the extension of last date of submission and change in Pre-qualification criteria of REoI. **(Copy of emails enclosed).** In this regard, it is proposed to extend the date of submission of REoI upto 7th October 2016

4. File is submitted for seeking approval on the following:

i. TEC meeting may be scheduled on 30th September, 2016.
ii. The last date of submission of REoI may be extended upto 7th October, 2016.

i.

Submitted for approval please.

28/09/2016 5:53 PM

AMIT KUMAR-AD
(AD)

Note No. #17

30th Sept. 11.00 am. The date may be extended as proposed.

28/09/2016 7:14 PM

SUNIL SHARMA
(JS)

Note No. #18

29/09/2016 12:13 PM

JITENDRA ARORA
(DIR)

Note No. #19

Subject: **Constitution of Technical Evaluation Committee (TEC) for setting-up of Integrated Health Information Platform (IHIP).**

This is in reference to the setting-up of the Integrated Health Information Platform (IHIP) and selection of the service provider for Health IT solutions by publishing the Request for Expression of Interest (REOI) document.

2 Centre for Health Informatics (CHI) setup by MoHFW has been mandated to administer the development and implementation of IHIP through an IT services provider to be selected by an Open Tender process in two stages (EoI & RFP). For this purpose, the Request for Expression of Interest (REoI) has already been published for the selection of the service provider for Health IT solutions. (http://www.nhp.gov.in/tender_pg)

3. To complete the process of selection of an agency, it is proposed that a Technical Evaluation Committee (TEC) may be constituted at CHI, NIHFW. In this regard, Composition of the Technical Evaluation Committee (TEC) may be proposed as below:

Sh. Sunil Sharma, JS(eGov), MoHFW	**Chairman**
Dr. Deepak Agarwal, Additional Professor (Neurosurgery)	Member

Chairman Computerization, AIIMS	
Dr. C. Jayan, Joint Director, e-Health, Kerala	Member
Sh. Vinay Thakur, Director, NeGD, DeitY	Member
Sh. S.K Srivastav, Sr. Director, MeitY	Member
Mr. Milind Kulkarni, Scientist-G, Big Data Initiatives Division, DST(Big Data Analytics expert)	Member
Dr. M.L Singla, Head, Department of Business Management & Industrial Administration (ICT Expert).	Member
Dr. Amitabha Bagchi, Associate Professor & Data Analytics expert, IIT Delhi	Member
Shri Gaur Sunder, PTO, C-DAC, Pune	Member
Prof. S N Sarbadhikari, Project Director, CHI, NIHFW	Member
Shri S.K. Sinha, STD, NIC, MoHFW	Member
Shri Ankit Tripathi, Additional Director, CHI, NIHFW	Member
Shri Jitendra Arora, Director (e-Gov), MoHFW	**Member Convener**

4. The brief profiles of Dr. Amitabha Bagchi, Associate Professor & Data Analytics expert, IIT Delhi and Dr. M.L Singla, Head, Department of Business Management & Industrial Administration (ICT Expert) are placed on the file.

5. Submitted for approval please.

29/09/2016 4:02 PM

AMIT KUMAR-AD
(AD)

Note No. #20

JS may kindly approve.

29/09/2016 4:26 PM

JITENDRA ARORA
(DIR)

Note No. #21

Approved.

24/10/2016 8:43 PM

SUNIL SHARMA
(JS)

Note No. #22

25/10/2016 4:41 AM

JITENDRA ARORA
(DIR)

Note No. #23

25/10/2016 10:00 AM

S K PANI
(US)

Note No. #24

Subject: Setting up of a committee for working on data format of Integrated Health Information Platform (IHIP).

As desired by Shri Sunil Sharma, Joint Secretary (eHealth) a committee for working on data format of Integrated Health Information Platform (IHIP) is to be set up with the objective **"To outline elements and format for data to captured and collated by IHIP".**

2. The proposed composition of the said committee is as under:

- Dr. B.D. Athani, Spl. DG, MoHFW -

Chairman
- Shri Jitendra Arora , Dir (eHealth), MoHFW - Member
- Dr Deepak Agrawal, AIIMS Delhi - Member
- Ms. Metilda, AIIMS Delhi - Member
- Dr. Supten Sarbadhikari, Project Director, NHP - Member
- Representative from CBHI, MoHFW - Member
- Any other member as deemed required - Member

3. File is submitted for consideration and necessary approval please.

18/11/2016 4:45 PM

AMIT KUMAR-AD
(AD)

Note No. #25

18/11/2016 5:18 PM

S K PANI
(US)

Note No. #26

09/12/2016 3:56 PM

JITENDRA ARORA
(DIR)

Note No. #27

Subject: **Constitution of Technical Evaluation Committee (TEC) for setting-up of Integrated Health Information Platform (IHIP) and Constitution of Committee for finalisation of data elements and formats for IHIP.**

This is in reference to the setting-up of the Integrated Health Information Platform (IHIP) and selection of the service provider for Health IT solutions by publishing the Request for Expression of Interest (REOI) document.

2 Centre for Health Informatics (CHI) setup by MoHFW has been mandated to administer the development and implementation of IHIP through an IT services provider to be selected by an Open Tender process in two stages (EoI & RFP). For this purpose, the Request for Expression of Interest (REoI) has already been published for the selection of the service provider for Health IT solutions. (http://www.nhp.gov.in/tender_pg)

3. To complete the process of selection of an agency, it is proposed that a Technical Evaluation Committee (TEC) may be constituted at CHI, NIHFW. In this regard, Composition of the Technical Evaluation Committee (TEC) may be proposed as below:

1	Sh. Sunil Sharma, JS(eGov), MoHFW	**Chairman**
2	Dr. Deepak Agarwal, Additional Professor (Neurosurgery) Chairman Computerization, AIIMS	Member
3	Dr. C. Jayan, Joint Director, e-Health, Kerala	Member
4	Sh. Vinay Thakur, Director, NeGD, DeitY	Member
5	Sh. S.K Srivastava, Sr. Director, MeitY	Member
6	Mr. Milind Kulkarni, Scientist-G, Big Data Initiatives Division, DST(Big Data Analytics expert)	Member
7	Dr. M.L Singla, Head, Department of Business Management & Industrial Administration (ICT Expert).	Member
8	Dr. Amitabha Bagchi, Associate Professor & Data Analytics expert, IIT Delhi	Member
9	Shri Gaur Sunder, PTO, C-DAC, Pune	Member
10	Prof. S N Sarbadhikari, Project Director, CHI, NIHFW	Member
11	Shri S.K. Sinha, STD, NIC, MoHFW	Member
12	Shri Ankit Tripathi, Additional Director, CHI, NIHFW	Member

13	Special Invitees of specific sector (2 No)	Member
14	Shri Jitendra Arora, Director (e-Gov), MoHFW	**Member Convener**

4. Also, a workshop was held under the chairpersonship Dr. B.D. Athani, Spl. DG, DGHS MoHFW to discuss and outline elements and format for data to be capture and collected by Integrated Health Information Platform (IHIP). In the workshop, it was decided to constitute a committee for detailed working on and finalisation of data elements and formats for IHIP keeping in view the suggestions made during the workshop. The composition of the said committee is as follows:

1	Dr. Deepak Agarwal, Head Computerization, AIIMS	Chair
2	Dr. S.K. Srivastava, Sr. Director, MeitY	Member
3	Dr. Deepak Bhattacharya, Pulmonary & Respiratory Medicine, Safdarjung Hospital	Member
4	DDG, TB Division, MoHFW	Member
5	Dr. S.N Deshpande, RML Hospital	Member
6	Shri Parveen Srivastava, Joint Director, C-DAC, Noida	Member
7	Shri Gaur Sundar, iNRC SNOMED CT, CDAC Pune	Member
8	IT Department Incharge, PGI, Chandigarh	Member
9	Dr. S. B. Bhattacharya, TCS	Member
10	Dr. Arvind Sivaramakrishnan, Apollo hospital	Member
11	Dr Ashok Mittal, Practitioner Clinician	Special Invitee
12	Shri Ankit Tripathi	Convenor

The Committee is mandated to submit in three weeks' time the draft report on data elements and formats to be captured and stored in form of central repository at IHIP in line with the objectives set out for establishment of IHIP. The minutes of the workshop may be seen at p. 232/C .

5. File is submitted for approval of Secretary (HFW) for the constitution of aforementioned committees.

09/12/2016 6:43 PM

AMIT KUMAR-AD
(AD)

Note No. #28

13/12/2016 11:30 AM

S K PANI
(US)

Note No. #29

Approval of Secretary (HFW) is solicited for the constitution of aforementioned committees.

14/12/2016 3:05 PM

JITENDRA ARORA
(DIR)

Note No. #30

The second committeee would not need approval of Secretary. Pl resubmit as discussed.

27/12/2016 5:54 PM

SUNIL SHARMA
(JS)

Note No. #31

Subject: Constitution of Technical Evaluation Committee (TEC) for setting-up of Integrated Health Information Platform (IHIP).

This is in reference to the setting-up of the Integrated Health Information Platform (IHIP) and selection of the service provider for Health IT solutions by publishing the Request for Expression of Interest (REOI) document.

2 Centre for Health Informatics (CHI) setup by MoHFW has been mandated to administer the development and implementation of IHIP through an IT services provider to be selected by an Open Tender process in two stages (EoI & RFP). For this purpose, the Request for Expression of Interest (REoI) has already been published for the selection of the service provider for Health IT solutions. (http://www.nhp.gov.in/tender_pg)

3. To complete the process of selection of an agency, it is proposed that a Technical Evaluation Committee (TEC) may be constituted at CHI, NIHFW. In this regard, Composition of the Technical Evaluation Committee (TEC) may be proposed as below:

1	Sh. Sunil Sharma, JS(eGov), MoHFW	**Chairman**
2	Dr. Deepak Agarwal, Additional Professor (Neurosurgery) Chairman Computerization, AIIMS	Member
3	Dr. C. Jayan, Joint Director, e-Health, Kerala	Member
4	Sh. Vinay Thakur, Director, NeGD, DeitY	Member
5	Sh. S.K Srivastava, Sr. Director, MeitY	Member
6	Mr. Milind Kulkarni, Scientist-G, Big Data Initiatives Division, DST(Big Data Analytics expert)	Member
7	Dr. M.L Singla, Head, Department of Business Management & Industrial Administration (ICT Expert).	Member
8	Dr. Amitabha Bagchi, Associate Professor & Data Analytics expert, IIT Delhi	Member
9	Shri Gaur Sunder, PTO, C-DAC, Pune	Member
10	Prof. S N Sarbadhikari, Project Director, CHI, NIHFW	Member
11	Shri S.K. Sinha, STD, NIC, MoHFW	Member
12	Shri Ankit Tripathi, Additional Director, CHI, NIHFW	Member
13	Special Invitees of specific sector (2 No)	Member
14	Shri Jitendra Arora, Director (e-Gov), MoHFW	**Member Convener**

4. File is submitted for approval of Secretary (HFW) for the constitution of aforementioned

committees.

29/12/2016 10:45 AM

JITENDRA ARORA
(DIR)

Note No. #32

please discuss.

29/12/2016 3:47 PM

SUNIL SHARMA
(JS)

Note No. #33

Subject: Constitution of Technical Evaluation Committee (TEC) for setting-up of Integrated Health Information Platform (IHIP).

This is in reference to the setting-up of the Integrated Health Information Platform (IHIP) and selection of the service provider for Health IT solutions.

2. Centre for Health Informatics (CHI) setup by MoHFW has been mandated to administer the development and implementation of IHIP through an IT services provider. The RFP has already been published for selection of service provider for "Setting up of Integrated Health Information Platform (IHIP)" on 3rd January, 2017

3. To complete the process of selection of an agency, it is proposed that a Technical Evaluation Committee (TEC) may be constituted at CHI, NIHFW. In this regard, Composition of the Technical Evaluation Committee (TEC) may be proposed as below:

1	**Sh. Sunil Sharma, JS(eGov), MoHFW**	**Chairman**
2	Dr. Deepak Agarwal, Additional Professor (Neurosurgery) Chairman Computerization, AIIMS	Member
3	Dr. M.L Singla, Head, Department of Business Management & Industrial Administration (ICT Expert).	Member
4	Sh. Vinay Thakur, Director, NeGD, DeitY	Member
5	Sh. S.K Srivastava, Sr. Director, MeitY	Member

6	Sh. Balasubramaniam Gauthaman, GM(IT), Health & Medical Department, Telangana	Member
7	Mr. Milind Kulkarni, Scientist-G, Big Data Initiatives Division, DST(Big Data Analytics expert)	Member
8	Shri Gaur Sunder, PTO, C-DAC, Pune	Member
9	Shri S.K. Sinha, STD, NIC, MoHFW	Member
10	Sh. Dileep Nair, Chief Consultant, eHealth, Kerala	Member
11	Prof. S N Sarbadhikari, Project Director, CHI, NIHFW	Member
12	Special Invitees of specific sector (2 No)	Member
13	Shri Ankit Tripathi, Additional Director, CHI, NIHFW	Member
14	Shri Jitendra Arora, Director (e-Gov), MoHFW	**Member Convener**

4. The profile of TEC expert at Sr. No. 3, 6, 10 invited from other department may be seen as pg. 237-243/c

5. File is submitted for approval of Secretary (HFW) for the constitution of aforementioned committees.

09/02/2017 2:43 PM

JITENDRA ARORA
(DIR)

Note No. #34

As discussed please.

13/02/2017 12:01 PM

SUNIL SHARMA
(JOINT SECRETARY)

Note No. #35

Subject: Constitution of Technical Evaluation Committee (TEC) for setting-up of Integrated Health

Information Platform (IHIP).

This is in reference to the setting-up of the Integrated Health Information Platform (IHIP) and selection of the service provider for Health IT solutions.

2. Centre for Health Informatics (CHI) setup by MoHFW has been mandated to administer the development and implementation of IHIP through an IT services provider. The RFP has already been published for selection of service provider for "Setting up of Integrated Health Information Platform (IHIP)" on 3rd January, 2017.

3. To complete the process of selection of an agency, it is proposed that a Technical Evaluation Committee (TEC) may be constituted at CHI, NIHFW. In this regard, Composition of the Technical Evaluation Committee (TEC) may be proposed as below:

1	**Dr. B.D. Athani, Spl. DG, MoHFW**	**Chairman**
2	Sh. Sunil Sharma, JS(eGov), MoHFW	Co-Chairman
3	Dr. Deepak Agarwal, Additional Professor (Neurosurgery) Chairman Computerization, AIIMS	Member
4	Dr. M.L Singla, Head, Department of Business Management & Industrial Administration (ICT Expert).	Member
5	Sh. Vinay Thakur, Director, NeGD, MeitY	Member
6	Sh. S.K Srivastava, Sr. Director, MeitY	Member
7	Mr. Milind Kulkarni, Scientist-G, Big Data Initiatives Division, DST(Big Data Analytics expert)	Member
8	Sh. Dileep Nair, Chief Consultant, eHealth, Kerala	Member
9	Shri S.K. Sinha, STD, NIC, MoHFW	Member
10	Special Invitees of specific sector (2 No)	Member
11	Shri Jitendra Arora, Director (e-Gov), MoHFW	**Member**

		Convener

4. The profile of TEC expert at Sr. No. 4, 8 invited from other department may be seen as pg. 237-240/c.

5. File is submitted for approval of Secretary (HFW) for the constitution of aforementioned committees.

13/02/2017 1:02 PM

JITENDRA ARORA
(DIR)

Note No. #36

The Technical Evaluation Committee (TEC) as per constitution as proposed in para 3 of the note of Dir (eGOV) above may kindly be approved.

22/02/2017 6:41 PM

SUNIL SHARMA
(JOINT SECRETARY)

Digitally Signed

Note No. #37

We had discussed this , the committee may be chaired by an expert from eGov / IT/ ITeS or related field.

03/03/2017 1:08 PM

R K VATS
(AS AND DG)

Note No. #38

Pl discuss the proposal.

07/03/2017 9:03 PM

SUNIL SHARMA
(JOINT SECRETARY)

Note No. #39

TEC committee already approved.

07/04/2017 10:22 AM

JITENDRA ARORA
(DIR)

Note No. #40

20/11/2017 2:54 PM

AMIT KUMAR-DD
(DY.DIR)

Note No. #41

09/02/2018 6:20 PM

S K PANI
(US)

Table : Estimate of Cost for setting up of IHIP

Rs. Crore

Sl. No	Cost Elements	FY16-17 (current year)	Fy17-18	FY18-19	FY19-20	FY20-21	Total	Details
1	Applications/Software Design, Development, Testing, Audit & Deployment	16.5	16.5	-			33.1	-Applications for : Health Information Exchange, Analytics, Dashboards, Interoperability with healthcare IT systems (legacy systems) which do not comply with Standards etc. -Includes System Integration Testing, User Acceptance Testing, Load Testing, Performance Testing Certification, Security Audit -Licenses for Operating System, Database system
2	Development of Web Portal(s) for Citizen, Health Service Provider, Health Managers & Maintenance of portal(s)	0.5	0.5	0.2	0.2	0.2	1.5	- Development of portal(s) - Maintenance of portals(s) @ 15% p.a. of development cost
3	System Integration and Bridging API Toolkit	0.7	1.0	2.5	2.5	2.0	8.7	-Integration between various systems of IHIP -Development of API toolkit for facilitating inter-operability & exchange of data/ information -Testing of API toolkit -Enhancement of API Toolkit as need be in future
4	Maintenance of Applications/Software			3.1	3.1	3.1	9.4	-Starts after expiry of the first year under warranty -Assumed @ 20% of development cost
5	Response Center		0.5	0.5	0.5	0.5	1.9	-Team of response persons (5 nos.) for resolving technical & functional querries by various stakeholders/users -Associated operating cost
6	Capacity building (Workshops, Training of users & stakeholders)	0.2	0.3	0.3	0.5	0.5	1.7	Capacity building of state & centre users
7	On site support team to States	0.5	1.3	2.8	6.1	12.1	22.7	Team of 3 persons (on average) per State/UT
8	Team at CHI & PMU	0.9	1.6	1.8	2.0	2.2	8.4	-Team of 5 persons at CHI for overall supervision of the project -PMU of 4 persons -Average cost of 1,50,000 per man month
9	Institutional set-up	0.3	0.4	0.50	0.50	0.50	2.2	Office set up, infrastructure, IT etc.
10	Travel and Miscellaneous	0.1	0.1	0.2	0.3	0.4	1.1	Increasing over the period as more number of states would be covered
						Total	**90.7**	
						Contingency @ 5 %	**4.5**	
						Sub Total	**95.2**	

Note No. #14

Attachment:Approval of Hon'ble HFM For Setting up of IHIP.pdf

Assumptions:

(1) Selection of Agency expected to be completed 15.11.16. Design & Development of IHIP to be completed by 31.03.17. Pilot in two states & five hospitals by 31.08.17
(2) Applications could be purchased also as case may be, however for cost estimation man-months efforts & others associated costs have been estimated.
(3) Given high data privacy & security aspects, license cost (proprietary software) has been taken into consideration.
(4) Number of States/UT covered - 2 (FY16-17), 5 (Fy17-18), 10 (FY18-19), 20 (FY19-20), & 36 (FY20-21)
(5) Cost estimate is including taxes on services @15% & on licences @19.5%
(6) Increase assumed at 10% p.a. in manpower cost rate
(7) Manpower on outsourced basis
(8) Government Cloud & Connectivity Network assumed to be availabe free of cost

-27/N-

File No: Q-11013/4/2016-eGov
FTS: 3058246

Subject: Setting-up of Integrated Health Information Platform (IHIP).

This is in reference to the letter dated 21.06.16 (No.: NIHFW/CHI/IHIP/2016) **(F/A)** received in accordance with the review meeting held on 15th June, 2016, under the chairmanship of Add. Secretary (eGov) regarding the setting-up of the Integrated Health Information Platform (IHIP) and selection of the service provider for Health IT solutions by publishing the Request for Expression of Interest (REOI) document.

2. In the meeting of steering committee on E-health held on 27th July 2015 chaired and co-chaired by Secretary (HFW) and Secretary (DeitY) respectively, Health Mission Mode Project (MMP) Detailed Project Report (DPR)-aligned with Digital India Programme and E-Kranti (NeGP 2.0) was deliberated along with the comments received from NITI Aayog, D/o Expenditure and D/o E and IT. In the meeting it was decided to develop an integrated Health IT platform (supporting the envisaged architecture, having scalable properties and supporting compliance with IT and EMR/EHR standards of DeitY and MoHFW respectively and thus enabling interoperability) and progressively paving the way for phased implementation of the MMP. The minutes of the same are placed at **(F/B).**

3. Accordingly a concept note of IHIP along with the budgeting requirement has been prepared **(F/C)**. The primary objective of IHIP is integration of and interoperability amongst various Health IT systems (both public and private), by establishing a supporting infrastructure for health information data i.e. Health Information Exchange (HIE) network and creation of interoperable Electronic Health Records (EHRs) of the citizens on a pan-India basis.

4. The purpose of setting up IHIP is to facilitate better health services to citizens, improve efficiency for healthcare services and health programmes by optimum utilisation of resources, availability of information / data – in secure manner, and on real time basis- through integration of systems to enable the electronic health records (EHRs) of citizens to be made available nationwide with the help of a centralized accessible platform. This would facilitate continuity of care, confidential health data / records management, better affordability, optimal information exchange to support better health outcome, better decision support system, fewer redundancies and medical errors, low data redundancy, big data and predictive analytics etc.

5. In line with the decision taken in the Senior Officers meeting chaired by Secretary (HFW) held on 31.12.2015 **(F/D)**, an interoperable test bed/platform connecting with IT application of CGHS, Mother and Child Tracking System (MCTS) and NIKSHAY-TB has also been developed by NIC.

6. The total estimated cost for setting-up IHIP is estimated at Rs. 95 Crs. (approximately) over the period of 5 years. For cost estimation it has been assumed that the government cloud computing and network connectivity resources would be available free of any charges; or it will be estimated separately as it is not under the scope of the scheme.

7. Centre for Health Informatics (CHI) setup by MoHFW has been mandated to administer the development and implementation of IHIP. It has been already approved to register CHI as a 'Society' (National Centre for Health Informatics) under MoHFW.

8. A draft REOI prepared and submitted by CHI is placed on file **(F/F).** To complete the process of selection of an agency, it is proposed that a Technical Evaluation Committee (TEC) may be constituted at CHI, NIHFW, and with following Term of References (ToRs):

- Review, evaluate and finalize the REOI and RFP documents.
- Technical review of the eligibility of participating agencies and short listing of eligible agencies to whom RFP document would be issued.
- Participate in the pre-bid meeting and clarify queries and observations of the agencies.
- Laying down criteria for technical evaluation of the bids/proposals (in line with the Detail Project Report (DPR) of Health MMP approved by MoHFW).
- Evaluation of the bids/proposals received in line with the technical evaluation criteria approved.

9. In line with the General Financial Rules (GFRs), open tender process has to be followed for shortlisting the agency to "Design, Development, Implementation, Integration, Deployment and Maintenance" of the envisaged Integrated Health Information Platform (IHIP). It is proposed that "Two-Stage Open Tender" process would be followed wherein the interested agencies would be shortlisted through Request for Expression of Interest (REOI) and the final selection of implementation agency would be done through Request for Proposal (RFP) process.

10. The estimated cost for setting up of IHIP is Rs. 95 Crs. (approximately). As per the Department of Expenditure OM dated 29th June 2015 on the "Delegation of Powers for Approval of Public Funded Plan Schemes/Projects" **(F/E)**. The appraisal of the scheme is to be done by the concerned Joint Secretary of the Administrative Department and then to be approved by Secretary in consultation with the Financial Adviser for the limit of project value up to 100 Cr.

11. The necessary expenditure is proposed to be met by CHI from the funds being released under the Demand No.42 – Department of Health & Family Welfare, 2210-Medical and Public Health (Major head), 6800-Other Expenditure (Minor Head), 24-New Initiative Under Central Schemes, 2402-Telemedicine, 240231-Grant-in Aid for year 2016-17 and in subsequent years.

12. We may seek **a**pproval of the scheme as proposed above by Integrated Finance Division (IFD) and Secretary (HFW).

12/7/16
Jitendra Arora
Director (eGov)

JS (Admn)

IFD is requested to ~~Cont~~ concur the above proposal for setting up of IHIP, including O&M for 5 years in terms of the scope as broadly spell-out in the EOI document placed below, at a cost of Rs 95 crore.

AS (KBA)

IHIP (Integrated Health Information Platform) will be a software on which all Health related programmes & patient/hospital related

14/7/16

information will be hosted and on which myriad number of existing softwares across the country will get docking facility through a tunnel (known as bridging software so that output of various softwares becomes a valid input for IHIP. During the current FY, expenditure may be about Rs 20 Cr. However, for the time being, as per para 12 on pre-page, may concur to the proposal as outlined in P-27 & 28/N. This, once implemented, shall be a real game changer in bringing out health-related information from softwares in silos and exchange this across the country.

AS
15.7.16

FA

Pl. examine & submit.

15/7

Dir/IT-I
18/7

US (FW)

Min. of Health & F.W.
A.S. & FA's Office
FTS No. 148995
Date 19.7.16

2682
FTS NO. 148995
19/7/16

-30/n-

FTS No.148995

Integrated Finance Division

This is regarding setting up of Integrated Health Information Platform (IHIP) and selection of the service provider for IT solutions by publishing the Request for Expression of Interest (REOI) document. In this connection, notes of the Division on p.27-29/n may kindly be perused.

2. It has been stated that in the Steering Committee meeting of eHealth held on 12th July, 2015, co-chaired by Secretary (H&FW) and Secretary (DeitY), it was decided to develop IHIP and progressively paving way for phased implementation of the Health Mission Mode Project. The minutes of the same are placed at F/B. The justification and advantages of the proposal may kindly be perused on p.27/n.

3. The total estimated cost for setting up IHIP is Rs.95.00 crore (approx.) for the period of five years. For cost estimation, it has been assumed that the Government cloud computing and network connectivity resources would be available free of any charges or it will be estimated separately, as it is not under scope of the scheme.

4. The Division has stated that in line with the GFR, the open tender process will be followed for shortlisting the agencies to "design, development, implementation, integration, development and maintenance" of the envisaged IHIP. The Division has proposed that two stage open tender would be followed wherein the interested parties would be shortlisted through REOI process. Centre for Health Informatics (CHI) has been mandated to administer and develop the implementation of IHIP. A draft REOI proposed to be published for selection of service provider for health IT solutions is placed at F/F.

5. The expenditure for the project is proposed to be met by CHI from the funds being released to them under the relevant head, details of which are indicated at para (11) on p.28/n.

6. In this connection, it may be noted that as per DFPR 21 (b), "The power under this rule shall be exercised upto rupees twenty crore for open or limited tender contracts, upto rupees five crore for negotiated or single tender or proprietary contracts and upto rupees two crore for agreements or contracts for technical collaboration and consultancy services by the Secretary of the Department concerned and contracts or purchases, amount of which exceeds these value in the categories stated, shall require the approval of the Minister in-charge of the Department.

7. In view of the facts mentioned above, IFD may concur in the above proposal of the Division subject to approval of Hon'ble HFM.

(Thomas Mathew)
US (F-V)
21.07.2016

Director (IFD)

21/7

AS&FA

Dir/IFD

22/7

US(FV)

22/7

Dir (JA)

Min. of Health & F.W.
A.S. & F.A.'s Office
FTS No. 148995
Date 21/7/2016

File No: Q-11013/4/2016-eGov

Subject: Setting-up of Integrated Health Information Platform (IHIP)- Approval of Scheme regarding.

The envisaged goal of **Health Mission Mode Project (under E-Kranti & Digital India)** is to establish a pan-India Integrated Health Information System, meeting the needs of various stakeholder groups; and setting up Electronic Health Records (EHR) System including Health Information Exchanges (facilitating sharing of electronic health records on pan-India basis across different health care providers/facilities as well as for better data collation & analytics with an objective of more efficient healthcare planning purposes).

2 Steering Committee on E-Health, in its meeting held on 27th July 2015 deliberated on the Detailed Project Report (DPR) and EFC Memorandum of the Health Mission Mode Project (MMP) along with the comments received from NITI Aayog, D/o Expenditure and DeitY on the draft EFC Memorandum circulated. After detailed deliberation & discussion, the Steering Committee decided to develop an "Integrated Health Information Platform", supporting the envisaged architecture under health MMP, having scalable properties and supporting compliance with IT and EMR/EHR Standards and thus paving the way for achieving the **Interoperable Electronic Health Record (F/B).**

3. Accordingly a Concept Note on IHIP along with the budgetary estimate has been prepared **(F/C)**. The primary objective of IHIP is integration of and interoperability amongst various Health IT systems (both public and private), by establishing a supporting infrastructure encompassing Standards compliant EHR related IT applications, Health Information Exchange (HIE) etc. for health data/information creation and seamless flow including interoperable EHRs of the citizens on a pan-India basis.

4. The IHIP is envisaged to facilitate better health services to citizens and improve efficiency for healthcare services and health programmes. It would be achieved by optimum utilisation of resources, availability of information / data – in secure manner& on a (near) real time basis- through integration of different IT systems enabling EHRs of citizens and other public health data to be made available nationwide with the help of an integrated platform accessible by/linked with standards complaint IT systems across public & private sectors. IHIP is intended to facilitate continuity of care, confidential health data / records management, better affordability of healthcare services, optimal information exchange to support better health outcome, better decision support system, fewer redundancies and medical errors, low data redundancy, big data and predictive analytics etc.

5. The total cost for setting-up and operating IHIP is estimated at Rs. 95 Crore (approximately) for a period of 5 years. For cost estimation it has been assumed that the government cloud computing and network connectivity resources would be available free of any charges; or it will be estimated separately as it is not under the scope of the scheme.

6. Centre for Health Informatics (CHI) setup by MoHFW has been mandated to administer the development and implementation/ management of IHIP. It has already been approved to register the CHI as a 'Society' (National Centre for Health Informatics) under MoHFW.

7. The necessary expenditure is proposed to be met by Centre for Health Informatics (CHI) from the Plan funds being allocated to CHI under the Demand No.42 – Department of Health & Family Welfare, 2210-Medical and Public Health (Major head), 6800-Other Expenditure (Minor Head), 24-New Initiative Under Central Schemes, 2402-Telemedicine, 240231-Grant-in Aid for year 2016-17 and in subsequent years.

8. Concurrence of Financial Adviser/ Integrated Finance Division (IFD) of MoHFW has already been obtained to the above proposal / scheme (Pg. 30/n).

9. Development of IHIP for interoperable EHR is one of the "Action Plan based on Recommendations of Groups of Secretaries" and being monitored by Niti Aayog and Hon'ble PMO.

Office of Secretary (H&FW)
e-office No. 145825
Date 25/7/16

*Approval of Hon'ble HFM is solicited for the scheme of implementation of **Integrated Health Information Platform** to achieve interoperable EHRs of the citizens on a pan-India basis at an estimated cost of Rs. 95 Crore (over five year period) under Plan Budget being allocated to eGovernance Division of MoHFW.*

25/7/16
(Jitendra Arora)
Director (eGov)

on leave
JS(eGov)

AS(KBA) 26/7/16

Secretary(HFW) what is the break-up of the cost — Component wise and year wise?

MoS

AS(KBA) Expeditiously pl. 27.7.16 27/7/16

HFM

JS(eGov) 27/7/16

Dir(eGov)

33/N

File NO. Q-11013/4/2016-eGov

Subject.: Setting-up of Integrated Health Information Platform (IHIP)-Approval of Scheme Regarding.

Reference noting on prepage:

The Component-wise and year-wise breakup of the cost estimation is placed on file. (F/Y)

In view of the above, Approval of Hon'ble HFM is solicited for the scheme of implementation of **integrated Health Information Platform to** achieve interoperable EHRs of the citizens on a pan-India basis at an estimated cost of Rs. 95 Crore (over five year period) under Plan Budget being allocated to eGovernance Division of MoHFW.

Office of Secretary (Health & FW) FTS No. 4895 16/8 Date 16/8

(Jitendra Arora)
Director (eGov)
11.08.2016

JS(eGov)

Note from p- 31/N onwards explains.
As was desired, year-wise break up is brought out at P-3'.
Approval on para marked 'A' at prepage is requested.

12/8/16

AS (KBA)

14.8.16

Secy (HFW)

Approved. May please get concurrence of IFD.

18/8

AS(KBA)

AS & FA

18/8

Pl. examine & submit.

W/FV

18/8

Min. of Health & F.W. A.S. & FA's Office FTS No. 4895 Date 18/8/16

3096 1489

-34/n-

FTS No.148995

Integrated Finance Division

This is regarding setting up of Integrated Health Information Platform (IHIP) and selection of the service provider for IT solutions by publishing the Request for Expression of Interest (REOI) document. The total estimated cost for setting up IHIP is Rs.95.00 crore approximately. The component and year wise breakup of the cost estimation is placed at F/Y.

2. IFD examined the case vide p.30/n and concurred in the proposal of the Division subject to approval of Hon'ble HFM.

3. We may, therefore, return the file to the Division for necessary action.

(Thomas Mathew)
US (F-V)
19.08.2016

Director (IFD) -on leave

~~US(F-5)~~

AS&FA

~~US/F-V~~

22/8/16

22/8

Dir (JA)

File No: Q-11013/4/2016-eGov

Subject: Setting-up of Integrated Health Information Platform (IHIP)- Approval of Scheme regarding.

Reference notings on page 31-34/n.

The envisaged goal of Health Mission Mode Project (under E-Kranti & Digital India) was to establish a pan-India Integrated Health Information System, meeting the needs of various stakeholder groups; and setting up Electronic Health Records (EHR) system including Health Information Exchanges (for sharing of health records across states and health care providers).

2 Steering Committee on E-health, in its meeting of held on 27th July 2015 deliberated on the Detailed Project Report (DPR)/ EFC memo of the Health Mission Mode Project (MMP) under Digital India Programme and E-Kranti (NeGP 2.0) and the comments received from NITI Aayog, D/o Expenditure and DeitY. In this meeting it was decided to develop an integrated Health IT platform (supporting the envisaged architecture, having scalable properties and supporting compliance with IT and EMR/EHR standards and thus paving the way for achieving the **Interoperable Electronic Health Record (F/B).**

3. Accordingly a concept note of IHIP along with the budgeting requirement has been prepared **(F/C)**. The primary objective of IHIP is integration of and interoperability amongst various Health IT systems (both public and private), by establishing a supporting infrastructure for health information data i.e. Health Information Exchange (HIE) network and creation of interoperable Electronic Health Records (EHRs) of the citizens on a pan-India basis.

4. The purpose of setting up IHIP is to facilitate better health services to citizens, improve efficiency for healthcare services and health programmes by optimum utilisation of resources, availability of information / data – in secure manner, and on real time basis- through integration of systems to enable the electronic health records (EHRs) of citizens to be made available nationwide with the help of a centralized accessible platform. This would facilitate continuity of care, confidential health data / records management, better affordability, optimal information exchange to support better health outcome, better decision support system, fewer redundancies and medical errors, low data redundancy, big data and predictive analytics etc.

5. The total estimated cost for setting-up IHIP is estimated at Rs. 95 Crs. (approximately) over the period of 5 years. For cost estimation it has been assumed that the government cloud computing and network connectivity resources would be available free of any charges; or it will be estimated separately as it is not under the scope of the scheme.

6. Centre for Health Informatics (CHI) setup by MoHFW has been mandated to administer the development and implementation/ management of IHIP. It has already been approved to register the CHI as a 'Society' (National Centre for Health Informatics) under MoHFW.

8. The necessary expenditure is proposed to be met by Centre for Health Informatics (CHI) from the Plan funds being allocated to CHI under the Demand No.42 – Department of Health & Family Welfare, 2210-Medical and

Public Health (Major head), 6800-Other Expenditure (Minor Head), 24-New Initiative Under Central Schemes, 2402-Telemedicine, 240231-Grant-in Aid for year 2016-17 and in subsequent years.

9. The component wise and year wise break-up of the cost estimation is placed on file (F/Y). Concurrence of Financial Adviser/ Integrated Finance Division (IFD) of MoHFW has already been obtained to the above proposal / scheme (Pg. 30, 34/n).

10. Development of Integrated Health Information Platform (IHIP) for interoperable EHR is one of the Action Plan based on Recommendations of Groups of Secretaries and being monitored by Niti Aayog/ Hon'ble PMO.

In view of the above, approval of Hon'ble HFM is solicited for approval of scheme of implementation of ***Integrated Health Information Platform (IHIP)*** *to achieve interoperable Electronic Health Records (EHRs) of the citizens on a pan-India basis at an estimated cost of Rs. 95 Cr. under Plan Budget being allocated to eGovernance division of MoHFW.* (A)

23/8/16
(Jitendra Arora)
Director (eGov)

JS(eGov)

Approval of Hon'ble H FM on (A) above is requested.

23/8/16

AS (KBA)

23/8/16

Secretary

23/8

MDS (FSK)

24/8

HFM

25/8/16.

Office of the MOS(H&FW
FTS No. 148995
Date 24/8/16

Office of M/o H&FW
Dy. No. 148995
Date 24/8/16

Mos(FSK)

AS(KBA) 26/8

Secy(HF)

JS(e-Gov) 29/8 on tour

DIV(eGov)

US(eGov)

29/8/16